



Date: February 4, 2020

To: Scott Houthuysen, Broadcom Inc.

From: Sheri Knox, P.E., PMP®

Subject: **BI-MONTHLY GROUNDWATER REMEDIATION PROGRESS REPORT  
DECEMBER 2019 AND JANUARY 2020  
U.S. EPA DOCKET NO. RCRA-03-2013-0105CA**

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This Bi-monthly Report for December 2019 and January 2020 summarizes RCRA Corrective Action activities and Additional Work Plan implementation conducted by Wood Environment and Infrastructure Solutions, Inc. (Wood; formerly Amec Foster Wheeler) at the former Richmond Works Facility, located at 4500 S. Laburnum Avenue in Richmond, Virginia. On December 29, 2015, the Additional Work Plan (Work Plan) to implement temporary system shut down, trend analysis, and pilot test was approved in an email provided by the Environmental Protection Agency (EPA) to LSI Corporation. LSI Corporation was acquired by Avago Technologies in May 2014. Effective February 1, 2016, Avago Technologies acquired Broadcom Corporation to form a new company "Broadcom Limited." In April 2018, Broadcom Limited was redomiciled in the United States as "Broadcom Inc."

On December 13, 2016, the groundwater treatment system (GWTS) resumed operation with groundwater extraction from EW9 to evaluate its effect on the source area. Additionally, EW18 was re-activated on October 3, 2017 to evaluate its effect on restricting the movement of source area concentrations to the western boundary of the site via preferential pathways.

On November 22, 2017, EPA provided a letter of approval for the "Interim Next Steps" included in the August 2017 Biennial Operations and Maintenance Assessment Report (August 2017 Biennial Report). The "Interim Next Steps" outlined the approach/schedule for groundwater monitoring and GWTS operation for the 2015 to 2017 Biennial Reporting period. On August 26, 2019, the August 2019 Biennial Report was submitted to the EPA, and was approved by EPA on October 10, 2019. On September 4, 2019, a technical memorandum describing the Proposed Modification of Corrective Measures was also submitted to EPA for discussion. After review of the technical memorandum, EPA conveyed in a letter dated October 29, 2019 that they will issue an Explanation of Significant Differences (ESD) describing and soliciting public comments on the measures in the technical memorandum. The ESD was submitted for public notice on January 22, 2020 with a 30-day period for comment. The following information summarizes the groundwater monitoring activities performed according to the August 2017 Biennial Report and referenced in the August 2019 Biennial Report; GWTS operations during this reporting period, and soil sampling performed in January 2020.

## 1. Interim Plan Implementation – December 2019 and January 2020

### **Background**

The GWTS was shut down temporarily on January 13, 2016 as part of the approved Work Plan implementation and, as previously discussed, resumed operation on December 13, 2016. Therefore, as of December 13, 2016, weekly routine inspections of the GWTS and associated repairs and maintenance were conducted.

In December 2015, a model well (MW66), located on the Longhorn Steakhouse parcel, and three pilot test wells, (P1, P2, and P3), were installed approximately 6 feet, 12 feet, and 20 feet downgradient from EW10. Monitoring and extraction well locations, including EW10, are shown on **Figure 1**. The in-situ chemical oxidation pilot test results were summarized in previous bi-monthly reports, and detailed in the August 2017 Biennial Report. In addition, a soil assessment was performed in 2017 at the LSI site near the former manufacturing building. The results of the soil assessment were reported in the March 2017 Bi-monthly Report and detailed in the August 2017 Biennial Report. An additional soil assessment was completed in 2018 near the vicinity of the former tank farm and underground concrete pads to further delineate impacted source area vadose zone soil. The results of the additional soil assessment were reported in the November 2018 Bi-monthly Report and were detailed in the August 2019 Biennial Report. As previously discussed, it appears elevated soil concentrations identified beneath the concrete pads align with elevated total VOCs identified in groundwater samples from temporary wells which have since been abandoned. MW-2 and MW-5, located in close proximity to the concrete pads, have been added to quarterly monitoring.

From November 18-21, 2019, groundwater samples were collected from monitoring wells MW1, MW2, MW3, MW4, MW5, MW6, MW7, MW8, MW9, MW10, MW11, MW12, MW13, MW14R, MW15R, MW16, MW17, MW18, MW21R, MW22R, MW23, MW24, MW25, MW26, MW28, MW29, MW30R, MW31, MW32, MW33, MW34, MW35, MW36, MW37, MW50, MW51, MW52, MW53, MW54, MW55, MW56, MW62, MW63, MW64, MW65, and MW66; extraction wells EW1, EW2, EW3, EW4, EW5, EW6, EW8, EW9, EW10, EW11, EW12, EW13, EW14, EW15, EW16, EW17, and EW18; and surface water locations SW15, SW20, SW21, and SW67 to obtain the status of groundwater conditions. Extraction well EW7 was inaccessible due to overgrown briars and vegetation blocking access. Mall management, DDR Corp. was contacted, and Wood will coordinate with DDR Corp. prior to the next sampling event in February 2020 so that EW7 can be sampled. Groundwater samples were sent to Air, Water, and Soil Laboratories, Inc. for analysis of VOCs according to SW Method 8260B. The November 2019 groundwater results were not available at the submittal of

the previous bi-monthly report, and so, November 2019 groundwater results are included in this December 2019-January 2020 Bi-monthly Report.

From January 14-16, 2020, Wood mobilized to the site to collect additional soil samples in the vicinity of the former tank farm and underground concrete pads to further delineate impacted source area vadose zone soil and to obtain a soil profile for waste management characterization purposes. To clear underground utilities, each boring location was evaluated using the air knife/vacuum excavation method from the ground surface to either 5 feet below ground surface (bgs) or to the surface of the underground concrete pads. When the underground concrete pads were encountered, a solid stem auger was used to drill through the thickness of the concrete. Direct push methods were used beyond 5 feet bgs or the depth of the concrete pads. A total of 13 soil borings were advanced to depths between 14 and 18 feet bgs and soil samples from each boring were field-screened every 1-foot interval using a ppb RAE photoionization detector (PID). Generally, the soil sample with the highest PID measurement in the vadose zone for each boring (e.g., 13 samples total) was collected in laboratory-provided sample containers and sent to Air, Water, and Soil Laboratories, Inc. for analysis. Thirteen soil samples were analyzed for assessment and/or waste characterization purposes. Additional information regarding the soil sampling is found in the Discussion section below.

### **Contingency Results**

Results from MW50, MW51, MW53, MW54, MW55, MW56, and SW67 can trigger a contingency action, so the most recent laboratory results from these wells are summarized in **Insert 1** and **Insert 2** below.

### Insert 1: Groundwater Contingency Table

Constituents	GW Contingency Value (µg/L) <sup>1,2</sup>	Actual MW50 (µg/L) <sup>3</sup> Nov. 19, 2019	Actual MW51 (µg/L) <sup>3</sup> Nov. 19, 2019
1,1,1-TCA	4,000	17.4	13.0
1,1-DCA	80	10.5	16.5
1,1-DCE	150	127	130
MEC	100	<3.00	<3.00
1,4-Dioxane	92	46.2	51.6
VC	40	<0.50	0.54

Notes:

(1) The GW Contingency Value for 1,1,1-TCA, 1,1-DCA, 1,1-DCE, and MEC was estimated based on the ROD Clean up Level.

(2) The GW Contingency Value for 1, 4 dioxane was estimated based on its RSL at risk of 10<sup>-5</sup> MCL, and the GW Contingency for VC was estimated based on its MCL.

(3) J = Estimated value below the laboratory reporting limit.

### Insert 2: Surface Water Contingency Table

Constituent	Tier II SW Criteria (recreational use) µg/L	Tier II SW Criteria (biota ingestion) µg/L	Actual MW53 Nov. 19, 2019 µg/L	Actual MW54 Nov. 19, 2019 µg/L	Actual MW55 Nov. 19, 2019 µg/L	Actual MW56 Nov. 19, 2019 µg/L	Actual SW67 Nov. 19, 2019 µg/L
1,1-DCE	10,000 <sup>a,1</sup>	7,100 <sup>b</sup>	3.89	<0.70	<0.70	<0.70	<0.70
1,1-DCA	1,700 <sup>a,2</sup>	5,848 <sup>c,2</sup>	1.66	<0.60	<0.60	<0.60	<0.60
1,1,1-TCA	330,000 <sup>a,1</sup>	896,000 <sup>c,1</sup>	<0.60	<0.60	1.41	<0.60	<0.60
Methylene Chloride	3,000 <sup>a,1</sup>	5,900 <sup>b</sup>	<3.00	<3.00	<3.00	<3.00	<3.00
1,4-Dioxane	550 <sup>a,2</sup>	571 <sup>c,2</sup>	<2.00	<2.00	<2.00	<2.00	<2.00
VC	20 <sup>a,2</sup>	24 <sup>b</sup>	4.60	<0.50	<0.50	<0.50	<0.50

Notes: The most stringent of the recreational use or biota ingestion values identified by blue shading is the SW contingency.

(1) Based on HI = 1

(2) Based on 1 x 10<sup>-5</sup> risk

(a) VDEQ, Surface Water Risk Calculations

(b) Virginia Water Quality Standards – Other Surface Water/VRP Tier II Screening Level

(c) Wood derived using the equations/procedures for EPA and VDEQ. Most stringent criteria

J = Estimated value below the laboratory reporting limit

Please see the Work Plan approved on December 29, 2015 for details on how the contingency values were estimated.

Groundwater (**Insert 1**) or surface water (**Insert 2**) contingencies were not exceeded for the trigger water samples, so the contingency was not activated during December 2019 nor January 2020. Summary tables of groundwater and surface water contingency results (**Table 1A and 1B**) and a cumulative table including the entire sampling results since November 2015 (**Table 2**) are also included as attachments as discussed in our April 22, 2016 email with EPA<sup>1</sup>.

## **Discussion**

The information below includes a discussion of contingency wells, the compliance wells, monitoring wells of interest, and a summary of GWTS operation. The November 2019 Total VOCs in groundwater is illustrated in **Figure 1**.

### ***Contingency Wells***

Excluding MW50 and MW51, the Mann-Kendall Toolkit indicates that COC concentrations in the contingency wells/point (MW53, MW54, MW55, MW56, and SW67) exhibit either a "Stable" trend or "No Trend" meaning that thus far, after at least twenty monitoring events beginning January 2016, that COC concentrations show neither a decreasing nor increasing trend. Note the presence of carbon disulfide (5.07 J ug/L of 5.07 ug/L Total VOCs) in MW-56. Carbon disulfide is qualified as an estimated value below the laboratory reporting limit. The sources of carbon disulfide include both industrial and naturally occurring (i.e., wetlands) sources<sup>2</sup>.

Concentrations in MW50 show a "Increasing" trend for 1,1,1-TCA, 1,1-DCA, 1,1-DCE, and 1,4-dioxane when referenced to the initiation of the shut down test in January 2016, although trends of stability appear to be evident beginning in June 2016. Concentration trends of stability in MW50 may fluctuate seasonally, but potential changes in the stability will continue to be monitored.

Including the November 2019 sampling event, MW51 (1,1,1-TCA, 1,1-DCA, 1,1-DCE, and 1,4-dioxane), indicates an "Increasing" trend with the current concentration of 1,1-DCE (130 µg/L) in MW51 approaching the contingency value (150 µg/L).

However, since groundwater elevations for MW51 have stabilized, COCs in MW51 also appear to have stabilized as the Mann-Kendall Toolkit indicates that COC concentrations have remained "Stable"/ "No Trend" since October 2016 with the exception of 1,1-DCA which has concentrations

<sup>1</sup> Email and EPA concurrence discussing EPA reporting preferences dated April 22, 2016.

<sup>2</sup> Environmental Fact Sheet; ARD-EHP-11; New Hampshire Department of Environmental Services; 2006

that are "Increasing". 1,1-DCA concentrations have been higher since the initiation of the shut down test, so potential changes in the stability of concentrations in MW51 will continue to be monitored.

### **Compliance Wells**

Based on November 2019 results, COC concentrations in compliance monitoring wells (i.e., MW10, MW17, and MW28) show either stable, no trend, probably decreasing or decreasing trends since January 2016 except for the 1,1-DCE and VC (MW10) and 1,1-DCA (MW28) concentrations which are "Probably Increasing" or "Increasing". 1,1-DCE and 1,1-DCA concentrations may be increasing in MW10 and MW28, respectively, due to their location near the vicinity of EW9 and EW18; both of which have been active since December 2016. Regarding VC in MW10, concentrations may be increasing because of anaerobic biotic/abiotic processes that may be occurring<sup>3</sup> near the sewer utility corridor as it seems likely that carbon, an electron donor, is being released in that area. In addition, total VOCs are decreasing (MW17 and MW28) or stable (MW10) in these compliance wells since January 2016.

### **Monitoring Wells of Interest**

The Mann-Kendall Toolkit indicated "Increasing" or "Probably Increasing" concentrations of specific COCs for MW25 (1,1,1-TCA, 1,1-DCA, 1,1-DCE, and 1,4-dioxane), MW35 (1,1,1-TCA and 1,4-dioxane), and MW36 (1,1,1-TCA), located along the western property boundary, since November 2015 prior to the shutdown test. Total VOCs in MW-35 and MW36 tend to fluctuate between stable and increasing trends as groundwater elevation fluctuates seasonally, and total VOC concentrations in MW25 do not appear to be stable. Several factors could contribute to increasing concentrations in MW25 including its location near an intersection of three sanitary sewer lines that may be leaking and/or channeling impacted groundwater along the pipe beds toward MW25.

Other monitoring wells of interest include MW33 and MW34 that appear to be located along preferential pathways. In MW33, concentration trends of 1,1,1-TCA, 1,1-DCE, 1,4-dioxane, and Total VOCs are "Decreasing" or "No Trend" since February 2016. In addition, probably/increasing concentrations of 1,1-DCA (MW33) and VC (MW33) suggest that biotic or abiotic degradation is occurring<sup>2</sup> while increasing concentrations of MEC (MW33) are likely influenced by contaminant transport from the source area via the preferential pathways along the utility corridors. In MW34, concentrations of COCs/COIs are "Stable" or "Decreasing" since March 2016.

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<sup>3</sup> Final Protocol for In Situ Bioremediation of Chlorinated Solvents Using Edible Oil, Air Force Center for Engineering and the Environmental Science Division Technology Transfer Outreach Office, October 2007.

## **Soil Assessment and Waste Characterization**

As previously discussed, a total of 13 soil borings were advanced at the site using direct push methods beyond 5 feet bgs. Borings were field screened with a PID to evaluate the lateral and vertical extent of source area soil contamination. Boring logs were completed to document PID measurements, depths of soil samples, and soil classification. Thirteen soil samples from these borings were designated for assessment and/or waste characterization purposes and were sent to Air, Water, and Soil Laboratories, Inc. for analysis.

At the time of report submittal, Wood is in the process of evaluating the soil results pertaining to site COCs and potential waste characterization. These results will be discussed in further detail in the April 2020 Bi-monthly Report.

## **General Summary**

Overall, it appears from using the Mann Kendall Toolkit that Total VOC concentrations within the source area (e.g., MW7, MW10, and MW28) are either "Decreasing" or "Stable/No Trend" since the system shutdown in January 2016. Monitoring wells on the western perimeter of the site (e.g., MW25 and MW35) exhibit increasing total VOC concentrations, but higher water table elevations along the western perimeter of the site appear to limit contaminant transport offsite to the west. Currently, MW36 total VOC concentrations have a "Stable" trend, as MW36 appears to fluctuate seasonally between stable/no trend and increasing trends based on groundwater elevation fluctuations within the source area. Additionally, concentrations of total VOCs near MW25, MW35, and MW36 seem to be affected by preferential pathways near MW33 and MW34 (**Figure 1**).

The movement of water along the preferential pathways appears dependent on the amount of rainfall where increased rainfall causes mounding in the source area due to infiltration and numerous utilities which may transfer water to the area via pipe bedding or leaky piping (e.g., stormwater or sewer utilities). This mounding appears to push water along the preferential pathways to the west and occurs somewhat seasonally.

Once impacted groundwater reaches the western perimeter, it appears to move along the utility corridor to the north, and pool in the vicinity of MW25 contributing to increasing concentrations in that area. In August 2019 and November 2019, groundwater elevation was lower in the center of the site near MW10 where mounding occurs, and Total VOC concentrations in MW25 were reduced when compared to the May 2019 sampling event. However, after the groundwater pools at MW25, the natural groundwater flow conditions appear to re-establish.



Extraction well EW18 is located near this preferential pathway and it has been pumping in conjunction with EW9 to help reduce source area concentrations and limit the movement of COCs/COIs toward the western perimeter.

## **2. Changes to CMI (Corrective Measures Implementation)**

No additional changes were made to the CMI during this reporting period except those included in the Additional Work plan that was approved in December 2015 and the approved "Interim Next Steps."

## **3. Community and Government Communications**

No communications were initiated by Wood or required with representatives of the local community, public interest organizations, or the Commonwealth of Virginia except for notifying Virginia Department of Transportation (VDOT) and Richmond Traffic Control prior to collecting groundwater samples in or near their right-of-way for the November 2019 sampling event (e.g., MW50, MW51, MW52, MW53, MW54, MW55, MW56, MW62, MW64, and MW65), and communications with Henrico County regarding quarterly discharge sampling. During our communications with VDOT, Wood was informed that VDOT is planning to install an optic cable line in the median of Highway 64 near site monitoring wells. After discussion with Wood, VDOT placed a "note" in the design drawings indicating that the utility contractor must coordinate with Wood to avoid impacting monitoring wells and that repairs to damaged wells will be paid by the utility contractor.

Wood observed utility work along Highway 64 toward the end of July 2019 and the new utility trenches avoided our well field. Visual observations of the monitoring wells along Highway 64 during the November 2019 monitoring event did not indicate that monitoring wells were impacted/damaged.

## **4. Groundwater Treatment Assessment of System Performance**

As previously discussed, the GWTS was shut down temporarily on January 13, 2016. However, Extraction Well EW9 resumed pumping on December 13, 2016 to evaluate its effect on the source concentrations and along the western boundary of the site. EW9 was selected to draw COCs toward the source area and to avoid moving COCs toward the north or east by turning on other extraction wells.

EW18 was also re-activated on October 3, 2017 to evaluate its effect on restricting the movement of source area concentrations to the western boundary of the site via preferential pathways.





Similar to past reporting periods particularly in the spring and summer, there were some instances during this reporting period where the GWTS was de-activated due to power surges, brown outs, and/or equipment short circuits caused by stormy weather and/or flooding conditions. After notification through system automation to Wood of each incident, Wood personnel mobilized to the site in a timely manner to repair if necessary, reset, and continue operation.

The flow meter for EW18 was cleaned to remove iron fouling on January 10, 2020. EW9, EW18, and the GWTS were active during this reporting period and remain active at the submittal of this report.

The Self-Monitoring Report (SMR) related to the November 20, 2019 quarterly discharge sampling was completed and submitted to Henrico County on December 19, 2019. In addition, the annual visual site reconnaissance checklist was completed on November 21, 2019, to evaluate changes in site conditions. Site observations were summarized on the visual site reconnaissance checklist form and was submitted to EPA on December 13, 2019.

On January 17, 2020, quarterly discharge sampling was completed in accordance with the permit issued by Henrico County.

A total of 184,885 gallons of groundwater was extracted and treated by the GWTS during system operation since the submission of the last Bi-monthly Report. The total flow rate was 2,889 gallons per day (gpd) or 2.00 gallons per minute (gpm) and the average flow rate during system operation was 1,444 gallons per day (gpd).

## **5. Inspections and Corrective Actions**

Refer to Section 1 for a summary of other activities performed during the reporting period.

## **6. Changes in Personnel**

None at this time.

## **7. Projected Site Tasks**

Wood will continue to perform quarterly monitoring as described in the approved "Interim Next Steps" summarized in the August 2019 Biennial Report. Wood is in the process of analyzing this data and developing a long-term strategy. Weekly site checks, discharge monitoring, and system maintenance will continue during GWTS operation. The next monitoring event is scheduled to occur in March 2020.



The Self-Monitoring Report (SMR) related to the quarterly discharge sampling completed on January 17, 2020, will be submitted to Henrico County in February/March 2020.

## **8. Analytical Data and Results**

At the submittal of this report, the laboratory analytical data reports for the November 2019 sampling event will be included in the August 2021 Biennial Report as described in our correspondence with EPA in an email dated April 22, 2016. Stage 2B data validation is performed on samples collected from MW50, MW51, MW53, MW54, MW55, MW56, and SW67 according to the EPA Guidance<sup>4</sup>. Stage 2B data validation has been completed for sampling events performed up to August 2019. November 2019 data validation is in progress. The analytical data from the aforementioned sampling events satisfy the Stage 2B data validation according to the EPA Guidance<sup>4</sup>. The validation reports including for the previous reporting period were included in the August 2019 Biennial Report, and subsequent reports will be included in the 2021 Biennial Report but are available upon request. If data qualification actions summarized in a validation report indicate that laboratory data is unusable, the data qualification and corrective action will be reported in Bi-monthly results.

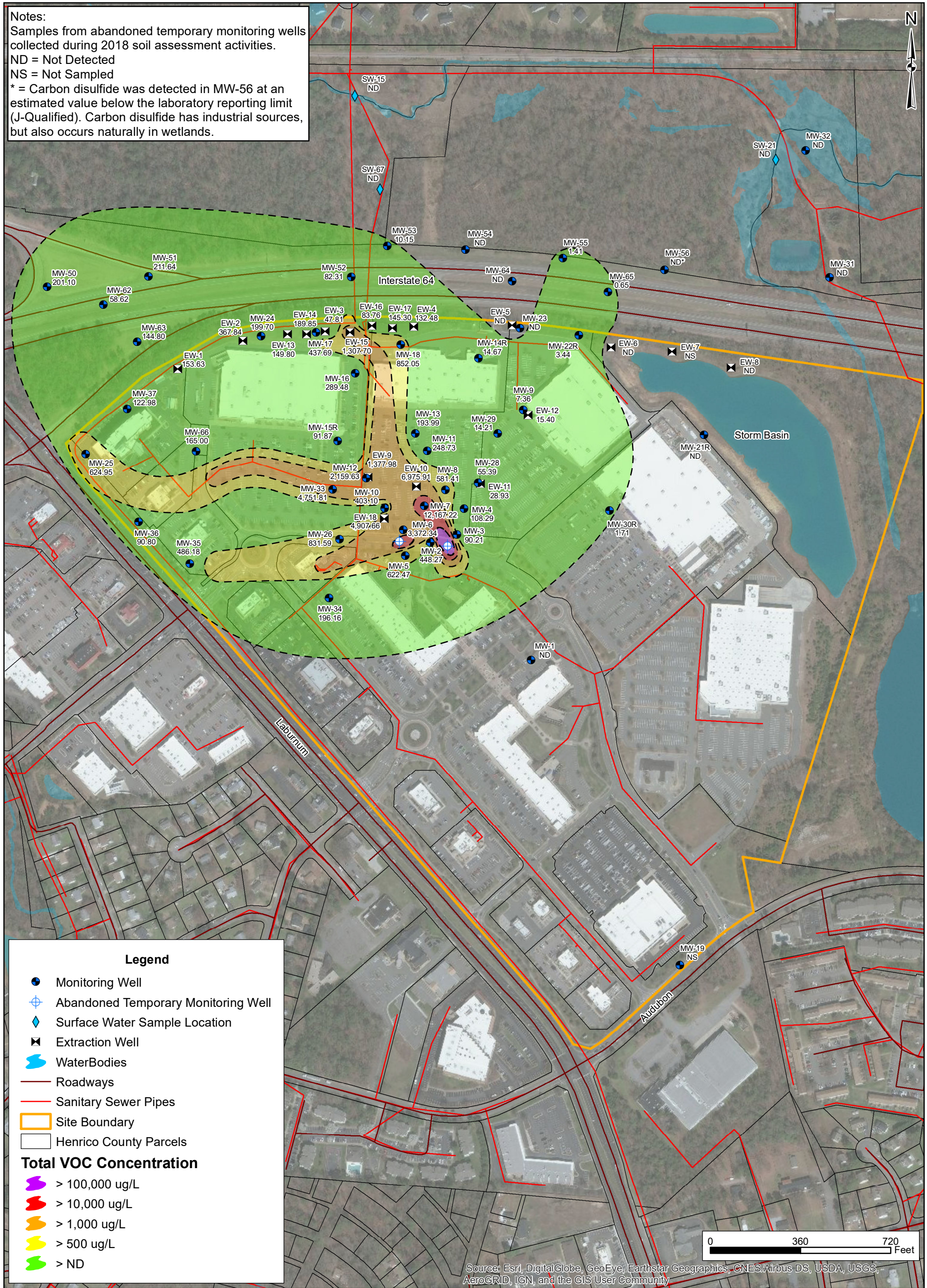
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<sup>4</sup> EPA Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use (540-R-08-005).

wood.

**FIGURE**





	SITE: <b>LSI CORPORATION</b> Former Lucent Richmond Works 4500 S. Laburnum Ave., Richmond, VA		TITLE: <b>NOVEMBER 2019 GROUNDWATER CONTAMINANT ISOCONCENTRATION - TOTAL VOC</b>		Figure:  <b>1</b>	
	CLIENT: <b>BROADCOM INC.</b>					
	<b>Wood Environment &amp; Infrastructure Solutions, Inc.</b> 4021 Stirrup Creek Drive, Suite 100 Durham, NC 27703 (919) 381-9900		SCALE: 1" = 360'	DATE: 12/12/2019		PROJECT: 6480199002
			DRAWN BY: D.Young			CHECKED BY: S. Knox
			LOCATION: \\dhm-fs1\projects\Comm-Ind\Projects\Clients G to L\LSI Richmond\6480199002 Start Jan 2019 07_CADD and GIS\Nov 2019			





## **TABLES**

**Table 1A**  
**History of VOCs**  
**Groundwater Contingency Table**  
**LSI/White Oak Village**  
**4500 S. Laburnum Avenue, Richmond, Virginia**

Monitoring Well	Date Sampled	1, 1, 1-TCA	1, 1-DCA	1, 1-DCE	MEC	1, 4-Dioxane	VC
GW Contingency Value		4,000	80	150	100	92	40
MW50	11/11/2015	2.05	1.54	19.2	<4.00	6.57	<0.50
	1/13/2016	1.22	1.03	12.3	<1.00	3.91	<0.30
	2/17/2016	<0.70	0.56 J	7.01	<1.00	2.71	<0.30
	3/23/2016	1.12	1.08	13.0	<1.00	5.00	<0.30
	4/19/2016	1.50	1.66	18.6	1.58 J	8.17	<0.30
	5/18/2016	0.83 J	0.92 J	10.3	<1.00	4.30	<0.30
	6/28/2016	<0.70	0.57 J	7.60	1.40 J	2.32	<0.30
	9/1/2016	3.62	3.15	48.2	<1.00	12.3	<0.30
	11/17/2016	3.77	3.35	48.9	<1.00	14.1	<0.30
	2/21/2017	2.88	2.32	29.5	<1.00	11.0	<0.30
	5/10/2017	3.26	2.48	31.1	<1.00	11.3	<0.30
	8/15/2017	10.5	6.59	95.6	<1.00	30.5	<0.30
	11/15/2017	5.08	3.39	41.5	<1.00	20.7	<0.30
	2/20/2018	4.43	3.40	42.3	<1.00	11.8	<0.30
	5/23/2018	1.95	1.45	19.5	<1.00	10.8	<0.30
	8/22/2018	3.66	3.06	44.0	<1.00	21.7	<0.50
	11/29/2018	1.40	1.41	19.0	<1.00	5.98	<0.50
	2/19/2019	0.70 J	0.76 J	8.82	<1.00	3.32	<0.50
MW51	5/15/2019	0.73 J	0.75 J	10.2	<1.00	4.91	<0.50
	8/20/2019	10.8	6.78	91.9	<3.00	30.3	<0.50
	11/19/2019	17.4	10.5	127	<3.00	46.2	<0.50
	11/11/2015	6.93	3.42	51.2	<4.00	22.8	<0.50
	1/13/2016	5.45	3.01	40.4	<1.00	14.6	<0.30
	2/17/2016	5.73	3.01	42.3	1.55 J	17.6	<0.30
	3/23/2016	4.54	2.58	35.1	<1.00	21.2	<0.30
	4/19/2016	6.53	3.52	54.8	1.17 J	17.3	<0.30
	5/18/2016	7.73	4.60	63.7	<1.00	28.2	<0.30
	6/28/2016	7.90	4.70	71.4	<1.00	25.9	<0.30
	9/1/2016	13.50	7.70	121	<1.00	38.7	<0.30
	10/19/2016	12.90	8.55	116	<1.00	Not Sampled	<0.30
	11/17/2016	14.2	10.1	128	<1.00	51.4	<0.30
	1/12/2017	10.9	10.7	120	<1.00	49.1	<0.30
	2/21/2017	14.6	13.4	134	<1.00	50.1	<0.30
	5/10/2017	13.3	10.1	128	<1.00	54.0	<0.30
	8/15/2017	12.7	12.0	137	<1.00	62.4	<0.30
	11/15/2017	10.7	9.80	111	<1.00	48.8	<0.30
	2/20/2018	11.6	13.7	131	<1.00	50.8	<0.30
	5/23/2018	10.4	11.0	116	<1.00	61.4	<0.30
	8/22/2018	9.25	9.80	99.8	<1.00	45.7	<0.50
	11/29/2018	8.93	10.7	104	<1.00	49.5	<0.50
	2/19/2019	17.5	17.5	145	<1.00	47.0	<0.50
	5/15/2019	14.0	11.0	113	<1.00	55.0	<0.50
	8/21/2019	11.0	12.5	100	<3.00	45.8	<0.50
	11/19/2019	13.0	16.5	130	<3.00	51.6	0.54

**Notes:**

Concentrations reported in micrograms per liter (µg/L)

**Bold** - Indicated that results are above the SW Contingency Value.

J = Estimated value below the laboratory reporting limit

TCA = Trichloroethane, DCA = Dichloroethane, DCE = Dichloroethylene, MEC = Methylene Chloride, VC = Vinyl Chloride

The GW Contingency Value was back-calculated for MW50 and MW51 assuming that impact to the water-supply wells is no greater than the respective ROD Cleanup Goals, RSL, or MCL using dispersion and advection with no reaction mechanisms that would attenuate.

Updated By: David Young Date: 12/12/2019

Checked By: Forrest Hayward Date: 12/27/2019

**Table 1B**  
**History of VOCs**  
**Surface Water Contingency Table**  
**LSI/White Oak Village**  
**4500 S. Laburnum Avenue, Richmond, Virginia**

Monitoring Well	Date Sampled	1, 1, 1-TCA	1, 1-DCA	1, 1-DCE	MEC	1, 4-Dioxane	VC
<b>SW Contingency Value</b>		<b>330,000</b>	<b>1,700</b>	<b>7,100</b>	<b>3,000</b>	<b>550</b>	<b>20</b>
<b>MW53</b>	11/11/2015	<1.00	0.48 J	1.83	<4.00	<100	<0.50
	1/13/2016	<0.70	0.65 J	0.48 J	<1.00	<2.00	0.69
	2/17/2016	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	3/23/2016	<0.70	2.47	5.76	<1.00	2.14	3.76
	4/19/2016	<0.70	4.43	13.0	1.51 J	3.49	6.14
	5/18/2016	<0.70	0.82 J	2.10	<1.00	<2.00	1.22
	6/28/2016	<0.70	<0.40	0.54 J	1.50 J	<2.00	0.33 J
	9/1/2016	<0.70	5.10	18.1	<1.00	5.23	5.96
	11/17/2016	<0.70	4.48	9.28	<1.00	3.38	6.37
	2/21/2017	<0.70	3.20	6.42	<1.00	3.31	4.60
	5/10/2017	<0.70	1.95	2.14	<1.00	<2.00	3.24
	8/15/2017	<0.70	3.81	7.85	<1.00	<2.00	7.42
	11/15/2017	<0.70	1.79	3.34	<1.00	<2.00	3.89
	2/20/2018	<0.70	0.61 J	0.68 J	<1.00	<2.00	1.11
	5/23/2018	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	8/22/2018	<0.60	3.40	8.69	<1.00	3.30	9.65
	11/29/2018	<0.60	2.76	7.15	<1.00	3.14	7.42
	2/19/2019	<0.60	0.64 J	3.27	<1.00	<2.00	0.51
	5/15/2019	<0.60	1.36	2.62	<1.00	<2.00	4.12
	8/20/2019	<0.60	1.97	5.45	<3.00	3.23	4.41
	11/19/2019	<0.60	1.66	3.89	<3.00	<2.00	4.60
<b>MW54</b>	11/11/2015	<1.00	<1.00	0.53 J	<4.00	<100	<0.50
	1/13/2016	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	2/17/2016	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	3/23/2016	<0.70	<0.40	<0.30	1.22 J	<2.00	<0.30
	4/19/2016	<0.70	<0.40	0.60 J	1.86 J	<2.00	<0.30
	5/18/2016	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	6/28/2016	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	9/1/2016	<0.70	<0.40	1.06	<1.00	<2.00	<0.30
	11/17/2016	<0.70	<0.40	0.30 J	<1.00	<2.00	<0.30
	2/21/2017	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	5/10/2017	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	8/15/2017	<0.70	<0.40	1.27	<1.00	<2.00	<0.30
	11/15/2017	<0.70	<0.40	0.44 J	<1.00	<2.00	<0.30
	2/20/2018	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	5/23/2018	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	8/22/2018	<0.60	<0.60	<0.70	<1.00	<2.00	<0.50
	11/29/2018	<0.60	<0.60	<0.70	<1.00	<2.00	<0.50
	2/19/2019	<0.60	<0.60	<0.70	<1.00	<2.00	<0.50
	5/15/2019	<0.60	<0.60	<0.70	<1.00	<2.00	<0.50
	8/20/2019	<0.60	<0.60	<0.70	<3.00	<2.00	<0.50
	11/19/2019	<0.60	<0.60	<0.70	<3.00	<2.00	<0.50



**Table 1B**  
**History of VOCs**  
**Surface Water Contingency Table**  
**LSI/White Oak Village**  
**4500 S. Laburnum Avenue, Richmond, Virginia**

Monitoring Well	Date Sampled	1, 1, 1-TCA	1, 1-DCA	1, 1-DCE	MEC	1, 4-Dioxane	VC
<b>SW Contingency Value</b>		<b>330,000</b>	<b>1,700</b>	<b>7,100</b>	<b>3,000</b>	<b>550</b>	<b>20</b>
<b>MW55</b>	11/11/2015	1.53	<1.00	<1.00	<4.00	<100	<0.50
	1/13/2016	0.71 J	<0.40	<0.30	<1.00	<2.00	<0.30
	2/17/2016	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	3/23/2016	1.14	<0.40	<0.30	1.47 J	<2.00	<0.30
	4/19/2016	1.37	<0.40	<0.30	2.01 J	<2.00	<0.30
	5/18/2016	0.77 J	<0.40	<0.30	<1.00	<2.00	<0.30
	6/28/2016	1.34	<0.40	<0.30	<1.00	<2.00	<0.30
	9/1/2016	2.07	<0.40	<0.30	<1.00	<2.00	<0.30
	11/17/2016	1.24	<0.40	<0.30	<1.00	<2.00	<0.30
	2/21/2017	1.50	<0.40	<0.30	<1.00	<2.00	<0.30
	5/10/2017	1.62	<0.40	<0.30	<1.00	<2.00	<0.30
	8/15/2017	1.00 J	<0.40	<0.30	<1.00	<2.00	<0.30
	11/15/2017	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	2/20/2018	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	5/23/2018	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	8/22/2018	<0.60	<0.60	<0.70	<1.00	<2.00	<0.50
	11/29/2018	<0.60	<0.60	<0.70	<1.00	<2.00	<0.50
	2/19/2019	<0.60	<0.60	<0.70	<1.00	<2.00	<0.50
<b>MW56</b>	5/15/2019	0.79 J	<0.60	<0.70	<1.00	<2.00	<0.50
	8/20/2019	1.12	<0.60	<0.70	<3.00	<2.00	<0.50
	11/19/2019	1.41	<0.60	<0.70	<3.00	<2.00	<0.50
	11/11/2015	<1.00	<1.00	<1.00	<4.00	<100	<0.50
	1/13/2016	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	2/17/2016	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	3/23/2016	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	4/19/2016	<0.70	<0.40	<0.30	1.31 J	<2.00	<0.30
	5/18/2016	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	6/28/2016	No Sample (Sample Damaged)					
	9/1/2016	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	11/17/2016	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	2/21/2017	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	5/10/2017	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	8/15/2017	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	11/15/2017	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	2/20/2018	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	5/23/2018	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	8/22/2018	<0.60	<0.60	<0.70	<1.00	<2.00	<0.50
	11/29/2018	<0.60	<0.60	<0.70	<1.00	<2.00	<0.50
	2/19/2019	<0.60	<0.60	<0.70	<1.00	<2.00	<0.50
	5/15/2019	<0.60	<0.60	<0.70	<1.00	<2.00	<0.50
	8/20/2019	<0.60	<0.60	<0.70	<3.00	<2.00	<0.50
	11/19/2019	<0.60	<0.60	<0.70	<3.00	<2.00	<0.50

**Table 1B**  
**History of VOCs**  
**Surface Water Contingency Table**  
**LSI/White Oak Village**  
**4500 S. Laburnum Avenue, Richmond, Virginia**

Monitoring Well	Date Sampled	1, 1, 1-TCA	1, 1-DCA	1, 1-DCE	MEC	1, 4-Dioxane	VC
<b>SW Contingency Value</b>		<b>330,000</b>	<b>1,700</b>	<b>7,100</b>	<b>3,000</b>	<b>550</b>	<b>20</b>
<b>SW67</b>	11/11/2015	<1.00	<1.00	<1.00	<4.00	<100	<0.50
	1/13/2016	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	2/17/2016	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	3/23/2016	<0.70	<0.40	<0.30	1.65 J	2.04	<0.30
	4/19/2016	<0.70	<0.40	<0.30	1.59 J	<2.00	<0.30
	5/18/2016	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	6/28/2016	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	9/1/2016	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	11/17/2016	<0.70	<0.40	0.45 J	<1.00	<2.00	<0.30
	2/21/2017	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	5/10/2017	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	8/15/2017	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	11/15/2017	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	2/20/2018	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	5/23/2018	<0.70	<0.40	<0.30	<1.00	<2.00	<0.30
	8/22/2018	<0.60	<0.60	<0.70	<1.00	<2.00	<0.50
	11/29/2018	<0.60	<0.60	<0.70	<1.00	<2.00	<0.50
	2/19/2019	<0.60	<0.60	<0.70	<1.00	<2.00	<0.50
	5/15/2019	<0.60	<0.60	<0.70	<1.00	<2.00	<0.50
	8/20/2019	<0.60	<0.60	<0.70	<3.00	<2.00	<0.50
	11/19/2019	<0.60	<0.60	<0.70	<3.00	<2.00	<0.50

**Notes:**

Concentrations reported in micrograms per liter (µg/L)

**Bold** - Indicated that results are above the SW Contingency Value.

J = Estimated value below the laboratory reporting limit

TCA = Trichloroethane, DCA = Dichloroethane, DCE = Dichloroethylene, MEC = Methylene Chloride, VC = Vinyl Chloride

SW Contingency Value is based on Virginia Department of Environmental Quality Surface Water Risk Calculations and Virginia Water Quality Standards - Surface Water/VRP Tier II Screening Levels.

Updated By: David Young Date: 12/12/2019

Checked By: Forrest Hayward Date: 12/27/2019

**Table 2**  
**Former AT&T Richmond Works Facility**  
**Surface Water and Groundwater Monitoring Results, ug/l**  
**Baseline Data for Shutdown begins in January 2016**

Location	Date Sampled	1,1-DCA	1,1-DCE	MEC	1,1,1-TCA	1,4-Dioxane	Vinyl Chloride	TOTAL VOCs	Chloro-ethane	Chloroform	PCE	TCE	Other VOCs
Clean-up Goal, ug/l	mm/dd/yyyy	4	7	5	200	4.6	2	--	NA	NA	NA	NA	NA
<b>Pilot Test Wells</b>													
P-1	12/16/2015	353	3310	1.76 J	1750	1150	1.94	6573.05	ND	1.31	0.73 J	1.21	3.1
	2/16/2016	293	2170	119	3640	880	22.1	7130.25	ND	0.84	0.42 J	0.71 J	4.18
	3/22/2016	226	17.1	20.7	3630	574	0.79	4499.71	ND	0.84	ND	2.00	28.28
	4/18/2016	328	0.53 J	159	2030	616	ND	3181.95	0.92 J	1.34	ND	ND	46.16
	5/16/2016	437	2840	1330	7010	1360	13.3	13010.42	0.54 J	1.18	0.68 J	1.33	16.39
	6/27/2016	425	3550	2350	6440	1560	25.6	14360.63	0.53 J	1.25	0.51 J	1.31	6.43
	8/30/2016	346	2470	633	2990	1940	6.80	8394.71	ND	1.32	0.48 J	1.31	5.8 J
P-2	12/16/2015	491	2240	89.9	690	869	13.1	4400.60	1.06	1.27	ND	1.30	3.97
	2/16/2016	253	1760	25.9	2830	708	17.3	5598.91	0.47 J	0.83	0.44 J	0.60 J	2.37
	3/14/2016	105	213	14.3	1830	213	6.16	2473.22	0.83 J	0.46 J	ND	7.05	83.42
	3/22/2016	114	213	13.4	1890	274	5.79	2575.06	0.76 J	ND	ND	3.24	60.87
	4/18/2016	208	209	21.4	7480	520	6.29	8478.32	ND	0.59	ND	1.04	32
	5/16/2016	249	372	293	3740	792	7.47	5481.25	0.88 J	0.64	0.45 J	0.94 J	24.87
	6/27/2016	239	1250	322	2720	707	22.9	5274.52	0.81 J	0.56	ND	0.70 J	11.55
P-3	8/30/2016	368	3040	2120	5810	1580	18.4	12946.85	0.66 J	1.33	0.48 J	1.39	6.59 J
	12/16/2015	493	2390	101	656	1020	13.5	4681.85	1.03	1.21	0.54 J	1.30	4.27
	2/16/2016	305	1710	31.8	1380	763	20.2	4215.84	1.15	0.83	ND	0.70 J	3.16
	3/14/2016	76.7	215	7.42	786	172	5.09	1350.37	0.45 J	ND	ND	2.93	84.78
	3/22/2016	57.3	135	7.11	928	141	3.24	1350.65	ND	ND	ND	2.34	76.66
	4/18/2016	159	198	13.6	3460	403	7.18	4283.22	1.11	ND	ND	1.07	40.26
	5/16/2016	195	306	68.2	2170	576	11.3	3359.03	1.00	0.47 J	ND	1.11	29.95
On-Site Monitoring Wells	6/27/2016	182	932	98.6	1240	516	23.8	3007.44	0.94 J	0.46 J	ND	0.54 J	13.1
	8/30/2016	262	1420	1140	2790	923	17.1	6557.75	0.63 J	0.77	ND	0.83 J	3.42 J
	11/12/2015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/15/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/14/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/27/2018	ND	1.30	ND	ND	ND	ND	1.30	ND	ND	ND	ND	ND
	11/18/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-1	11/10/2015	0.71 J	55.3	ND	60.7	ND	ND	116.71	ND	ND	ND	ND	ND
	11/17/2016	0.86 J	85.4	ND	159	ND	ND	245.26	ND	ND	ND	ND	ND
	11/14/2017	2.02	117	ND	772	ND	ND	891.83	ND	0.47 J	ND	0.34 J	ND
	11/27/2018	309	544	46.1	99.1	1020	1370	3399.62	2.62	ND	ND	ND	8.8 J
	8/20/2019	18.4	226	ND	264	ND	10.7	519.68	ND	0.58	ND	ND	ND
	11/20/2019	4.77	110	ND	315	12.8	5.70	448.27	ND	ND	ND	ND	ND
MW-2	11/10/2015	0.60 J	47.1	ND	13.3	ND	ND	61.00	ND	ND	ND	ND	ND
	2/16/2016	0.78 J	40.4	ND	7.38	ND	ND	48.56	ND	ND	ND	ND	ND
	5/17/2016	1.07	53.7	ND	23.1	2.15	ND	80.02	ND	ND	ND	ND	ND
	8/31/2016	0.63 J	32.0	ND	5.44	ND	ND	38.07	ND	ND	ND	ND	ND
	11/16/2016	0.62 J	16.5	ND	3.10	ND	ND	20.64	ND	ND	0.42 J	ND	ND
	2/20/2017	0.76 J	18.0	ND	2.35	2.90	ND	24.99	ND	0.44 J	0.54 J	ND	ND
	5/8/2017	1.50	27.2	ND	7.54	3.98	ND	40.82	ND	0.60	ND	ND	ND
	8/14/2017	1.70	22.6	ND	11.8	3.01	ND	41.14	ND	0.43 J	ND	ND	1.60 J
	11/14/2017	1.30	24.6	ND	24.4	6.70	ND	57.84	ND	0.84	ND	ND	ND
	2/19/2018	4.07	102	ND	116	11.9	ND	236.85	ND	2.88	ND	ND	ND
	5/21/2018	2.99	78.3	6.13	113	9.69	ND	221.81	ND	11.7	ND	ND	ND
	8/22/2018	1.52	61.6	ND	126	8.27	ND	210.35	ND	12.5	0.46 J	ND	ND
	11/27/2018	1.94	77.1	ND	167	11.6	ND	265.12	ND	7.48	ND	ND	ND
	2/18/2019	1.33	38.4	ND	88.4	7.17	ND	137.08	ND	1.78	ND	ND	ND
	5/13/2019	1.00	30.6	ND	50.8	ND	ND	82.92	ND	0.52	ND	ND	ND
MW-3	8/21/2019	0.88 J	26.6	ND	55.6	ND	ND	83.08	ND	ND	ND	ND	ND
	11/20/2019	0.87 J	30.4	ND	58.4	ND	ND	90.21	ND	ND	0.54 J	ND	ND
	11/12/2015	4.28	67.3	ND	115	ND	ND	188.43	ND	1.85	ND	ND	ND
	11/15/2016	10.6	105	ND	58.2	ND	ND	174.84	ND	0.52	0.52 J	ND	ND
	11/14/2017	3.78	49.3	ND	41.3	ND	ND	96.66	ND	2.28	ND	ND	ND
MW-4	11/27/2018	9.67	60.5	ND	53.2	ND	ND	127.12	ND	3.75	ND	ND	ND
	11/18/2019	9.89	56.9	ND	37.6	ND	ND	108.29	ND	3.90	ND	ND	ND

**Table 2**  
**Former AT&T Richmond Works Facility**  
**Surface Water and Groundwater Monitoring Results, ug/l**  
**Baseline Data for Shutdown begins in January 2016**

Location	Date Sampled	1,1-DCA	1,1-DCE	MEC	1,1,1-TCA	1,4-Dioxane	Vinyl Chloride	TOTAL VOCs	Chloro-ethane	Chloroform	PCE	TCE	Other VOCs
Clean-up Goal, ug/l	mm/dd/yyyy	4	7	5	200	4.6	2	--	NA	NA	NA	NA	NA
MW-5	11/10/2015	6.51	155	ND	354	ND	ND	515.51	ND	ND	ND	ND	ND
	11/15/2016	5.66	149	ND	997	ND	0.43 J	1152.09	ND	ND	ND	ND	ND
	11/14/2017	43.6	318	ND	1240	102	1.37	1704.97	ND	ND	ND	ND	ND
	11/27/2018	13.5	335	3.27 J	2800	46.9 J	2.82	3202.11	ND	ND	0.62 J	ND	ND
	8/21/2019	4.58	91.8	ND	153	ND	ND	249.38	ND	ND	ND	ND	ND
	11/20/2019	20.8	181	ND	373	46.5	1.17	622.47	ND	ND	ND	ND	ND
MW-6	11/10/2015	73.1	858	ND	2290	270	4.70	3496.48	ND	ND	ND	0.68 J	ND
	2/16/2016	29.6	621	ND	1810	58.3 J	1.35	2520.25	ND	ND	ND	ND	ND
	5/17/2016	122	1360	2.06 J	2510	ND	14.3	4009.99	0.58 J	0.44 J	ND	0.61 J	ND
	8/30/2016	150	1080	ND	1330	365	68.5	2995.94	0.48 J	0.42 J	ND	0.48 J	1.06 J
	11/16/2016	242	1440	7.13	1240	777	97.4	3806.34	ND	0.44 J	ND	0.58 J	1.79 J
	2/20/2017	227	1570	14.2	1460	614	105	3993.50	0.73 J	0.42 J	ND	0.50 J	1.65
	5/8/2017	255	1860	21.7	1610	544	124	4418.96	1.38	0.42 J	ND	0.44 J	2.02
	8/14/2017	479	2200	205	1050	1190	695	5835.71	7.27	0.53	ND	0.82 J	8.09 J
	11/14/2017	387	1380	98.0	860	1290	1350	5391.80	20.3	ND	ND	0.39 J	6.11
	2/19/2018	320	1050	86.2	1780	845	843	4937.26	6.22	ND	ND	0.49 J	6.35 J
	5/21/2018	883	1270	83.0	1260	1110	1660	6289.92	17.4	0.56	0.57 J	0.40 J	4.99 J
	8/21/2018	233	948	31.5	729	582	1210	3742.84	4.01	ND	0.52 J	ND	4.81
	11/27/2018	92.8	462	156	593	200	84.8	1589.61	ND	ND	ND	ND	1.01
	2/18/2019	11.1	165	ND	392	ND	14.3	582.40	ND	ND	ND	ND	ND
	5/14/2019	9.42	200	ND	539	ND	10.4	758.82	ND	ND	ND	ND	ND
	8/21/2019	19.4	237	ND	958	ND	6.47	1220.87	ND	ND	ND	ND	ND
	11/20/2019	202	1450	3.38 J	1060	496	158	3372.34	1.27	ND	0.55 J	ND	1.14
MW-7	11/12/2015	181	1940	1070	6740	834	3.64	10774.33	ND	0.79	0.51 J	1.13	3.26
	5/17/2016	257	2850	1280	6560	ND	19.9	10974.74	0.62 J	1.24	1.05	1.83	3.10
	11/15/2016	333	2000	2070	3490	1510	4.05	9429.80	0.58 J	1.48	0.64 J	1.50	18.55 J
	2/20/2017	6.29	136	ND	457	ND	ND	600.50	ND	0.60	0.61 J	ND	ND
	5/9/2017	300	2700	10.9	1530	883	1.51	5428.14	ND	0.94	0.58 J	1.21	ND
	8/14/2017	236	2260	ND	1580	573	1.87	4665.41	ND	1.10	0.91 J	1.31	11.22 J
	11/14/2017	520	4740	16.2	1380	771	2.30	7435.98	ND	1.63	1.65	2.53	2.97
	2/21/2018	584	4990	14.3	1740	960	3.48	8301.78	ND	2.21	1.52	2.45	3.82 J
	5/22/2018	614	3980	2.30 J	1090	562	3.25	6257.30	ND	2.75	1.14	1.86	ND
	8/21/2018	377	4220	5.18	1380	513	2.77	6504.90	ND	2.25	1.43	2.19	1.08 J
	11/27/2018	651	2830	ND	393	463	2.16	4344.33	1.06	1.16	0.82 J	1.55	0.58 J
	2/18/2019	776	2120	29.9	814	389	42.7	4247.02	70.6	1.18	1.11	1.51	1.02
	5/13/2019	2710	2500	184	946	836	396	7718.80	140	0.78	0.80 J	1.24	3.98 J
MW-8	8/20/2019	3000	4700	3220	7500	993	153	19591.52	8.60	1.24	0.91 J	1.58	13.19 J
	11/20/2019	2100	6340	279	1740	1360	111	12167.22	217	1.24	0.86 J	1.91	16.21 J
	11/12/2015	110	886	ND	571	299	0.71	1870.02	0.66 J	0.99	1.01	0.65 J	ND
	5/17/2016	165	984	1.47 J	463	ND	1.21	1618.02	ND	1.37	1.14	0.83 J	ND
	11/15/2016	207	1210	1.61 J	476	479	0.92	2379.10	0.71 J	1.74	1.16	0.96 J	ND
	5/8/2017	161	711	3.15 J	342	215	1.44	1437.89	1.09	1.12	1.12	0.97 J	ND
	11/14/2017	68.8	554	ND	174	102	0.82	901.86	0.42 J	0.73	0.65 J	0.44 J	ND
	5/21/2018	42.9	326	1.04 J	174	55.8 J	1.18	602.35	ND	1.43	ND	ND	ND
MW-9	11/27/2018	38.9	326	ND	95.5	107	1.35	570.38	ND	1.63	ND	ND	ND
	5/13/2019	76.6	401	1.11 J	185	ND	1.51	666.77	ND	1.55	ND	ND	ND
	11/19/2019	59.9	377	ND	142	ND	1.42	581.41	ND	1.09	ND	ND	ND
	11/12/2015	3.77	17.9	ND	6.66	3.01	ND	31.34	ND	ND	ND	ND	ND
	5/16/2016	3.76	5.85	ND	5.71	2.18	ND	17.50	ND	ND	ND	ND	ND
	11/15/2016	1.67	2.15	ND	5.76	ND	ND	9.58	ND	ND	ND	ND	ND
	5/8/2017	2.83	3.55	ND	6.81	ND	ND	13.19	ND	ND	ND	ND	ND
	11/16/2017	2.08	2.32	ND	8.88	ND	ND	13.28	ND	ND	ND	ND	ND
	5/22/2018	2.62	3.52	ND	7.53	ND	ND	13.67	ND	ND	ND	ND	ND
MW-9	11/26/2018	2.10	1.95	ND	8.87	ND	ND	20.21	ND	ND	ND	ND	7.29 J
	2/19/2019	1.82	1.89	ND	4.56	ND	ND	8.27	ND	ND	ND	ND	ND
	5/13/2019	1.76	2.52	ND	4.63	ND	ND	8.91	ND	ND	ND	ND	ND
	11/19/2019	1.58	1.38	ND	4.40	ND	ND	7.36	ND	ND	ND	ND	ND

**Table 2**  
**Former AT&T Richmond Works Facility**  
**Surface Water and Groundwater Monitoring Results, ug/l**  
**Baseline Data for Shutdown begins in January 2016**

Location	Date Sampled	1,1-DCA	1,1-DCE	MEC	1,1,1-TCA	1,4-Dioxane	Vinyl Chloride	TOTAL VOCs	Chloro-ethane	Chloroform	PCE	TCE	Other VOCs
Clean-up Goal, ug/l	mm/dd/yyyy	4	7	5	200	4.6	2	--	NA	NA	NA	NA	NA
MW-10	11/10/2015	26.8	127	ND	116	ND	0.79	270.59	ND	ND	ND	ND	ND
	1/12/2016	796	3260	45.7	5370	1470	4.93	10952.08	1.37	0.84	ND	0.88 J	2.4
	2/16/2016	10.9	33.3	ND	82.8	ND	ND	134.27	ND	ND	ND	ND	7.27 J
	3/22/2016	515	372	65.1	4290	820	1.87	6238.91	0.99 J	0.50 J	ND	11.2	162.25
	4/18/2016	285	157	20.2	2380	324	2.28	3215.72	ND	ND	ND	1.56	45.68
	5/16/2016	217	0.54 J	58.5	1250	277	0.62	1841.93	0.61 J	ND	ND	1.4	36.26
	6/27/2016	184	230	61.9	1250	242	1.00	1992.72	ND	ND	ND	0.62 J	23.20
	8/30/2016	274	96.8	8.69	1500	425	1.37	2330.94	ND	0.56	ND	0.45 J	24.07 J
	11/16/2016	144	625	1.26 J	399	346	16.7	1533.16	ND	0.41 J	ND	0.39 J	0.40 J
	2/20/2017	224	931	4.69	278	568	66.3	2074.58	ND	0.52	ND	0.56 J	1.51
	5/9/2017	172	927	3.14 J	267	353	57.8	1780.92	ND	ND	ND	0.41 J	0.57 J
	8/14/2017	129	766	9.48	219	333	132	1596.69	1.44	ND	ND	0.34 J	6.43 J
	11/14/2017	106	252	29.3	139	238	126	898.54	0.64 J	ND	ND	ND	7.60
	2/20/2018	120	681	82.0	945	296	87.6	2212.79	0.73 J	ND	ND	ND	0.46 J
	5/22/2018	253	1560	38.8	2690	560	56.8	5162.11	ND	0.85	0.41 J	0.83 J	1.42 J
	8/21/2018	201	1030	68.0	1490	339	90.7	3222.07	2.48	ND	ND	0.48 J	0.41 J
	11/28/2018	195	772	19.2	812	379	79.4	2259.04	1.01	ND	ND	0.53 J	0.90 J
	2/18/2019	1250	1870	26.5	1040	781	358	5339.38	3.25	0.64	0.76 J	1.22	8.01 J
	5/13/2019	609	1030	17.6	477	553	351	3048.41	3.59	ND	0.52 J	0.68 J	6.02 J
	8/19/2019	140	503	ND	44.7	352	105	1153.59	1.01	ND	ND	ND	7.88 J
	11/20/2019	52.8	154	ND	22.1	134	40.2	403.10	ND	ND	ND	ND	ND
MW-11	11/12/2015	14.9	102	ND	74.3	20.1	ND	211.79	ND	0.49 J	ND	ND	ND
	2/16/2016	14.3	108	ND	94.8	14.4	ND	232.12	ND	0.62	ND	ND	ND
	5/17/2016	13.2	113	1.26 J	90.7	18.0	ND	236.75	ND	0.59	ND	ND	ND
	8/30/2016	13.4	150	ND	114	15.8	ND	293.91	ND	0.71	ND	ND	ND
	11/16/2016	11.7	123	ND	102	15.1	ND	253.66	ND	0.82	ND	ND	1.04 J
	2/20/2017	10.2	113	ND	109	12.8	ND	245.76	ND	0.76	ND	ND	ND
	5/9/2017	10.8	166	ND	144	11.3	ND	332.52	ND	ND	ND	0.42 J	ND
	8/14/2017	12.2	135	ND	129	12.3	ND	290.19	ND	0.50 J	ND	ND	1.19 J
	11/14/2017	7.74	84.8	ND	93.1	10.1	ND	196.16	ND	0.42 J	ND	ND	ND
	2/20/2018	11.5	112	ND	96.4	7.05	ND	227.40	ND	0.45 J	ND	ND	ND
	5/22/2018	14.2	116	4.74	86.8	7.09	ND	229.93	ND	0.69	0.41 J	ND	ND
	8/21/2018	11.4	90.7	ND	67.6	10.8	ND	181.16	ND	0.66	ND	ND	ND
	11/28/2018	9.77	129	ND	68.3	13.1	ND	220.92	ND	0.75	ND	ND	ND
	2/18/2019	12.3	129	ND	76.1	17.8	ND	236.59	ND	0.99	0.40 J	ND	ND
	5/14/2019	10.2	139	ND	79.8	11.1	ND	240.93	ND	0.83	ND	ND	ND
	8/20/2019	9.57	124	ND	74.0	12.0	ND	229.47	ND	0.84	0.46 J	ND	8.60 J
	11/19/2019	10.9	138	ND	81.3	12.1	ND	248.73	ND	0.89	ND	ND	5.54 J
MW-12	11/10/2015	43.3	974	ND	876	124	ND	2019.22	ND	0.61	0.50 J	0.81 J	ND
	11/16/2016	49.5	364	8.72	537	70.7 J	0.36 J	1039.53	ND	0.64	0.50 J	0.51 J	7.6 J
	11/14/2017	55.4	1380	6.16	1310	ND	1.61	2792.72	ND	0.89	0.59 J	0.92 J	37.15
	11/27/2018	34.7	250	19.8	841	ND	1.07	1177.98	ND	0.88	ND	ND	30.53 J
	11/19/2019	37.4	737	17.7	1360	ND	0.98	2159.63	ND	1.65	0.97 J	1.53	2.40 J
MW-13	11/10/2015	15.4	122	ND	9.31	ND	ND	147.15	ND	ND	ND	ND	0.44 J
	5/17/2016	19.4	161	ND	10.5	ND	ND	191.30	ND	ND	ND	ND	0.40 J
	11/16/2016	18.7	166	ND	12.6	ND	ND	197.62	ND	ND	ND	ND	0.32 J
	5/9/2017	19.0	157	ND	10.9	ND	ND	187.68	ND	0.49 J	ND	ND	0.29 J
	11/14/2017	16.2	143	ND	8.59	ND	ND	168.14	ND	ND	ND	ND	0.35 J
	5/22/2018	19.8	152	5.76	10.4	ND	ND	189.63	ND	0.55	ND	ND	1.12
	11/28/2018	17.7	176	ND	10.2	ND	ND	203.90	ND	ND	ND	ND	ND
	5/14/2019	15.8	153	1.43 J	8.16	ND	ND	178.39	ND	ND	ND	ND	ND
	11/19/2019	22.1	164	ND	7.89	ND	ND	193.99	ND	ND	ND	ND	ND

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**Baseline Data for Shutdown begins in January 2016**

Location	Date Sampled	1,1-DCA	1,1-DCE	MEC	1,1,1-TCA	1,4-Dioxane	Vinyl Chloride	TOTAL VOCs	Chloro-ethane	Chloroform	PCE	TCE	Other VOCs
Clean-up Goal, µg/l	mm/dd/yyyy	4	7	5	200	4.6	2	--	NA	NA	NA	NA	NA
MW-14R	11/12/2015	0.60 J	<b>9.35</b>	ND	1.08	ND	ND	11.77	ND	ND	ND	ND	0.74 J
	2/16/2016	0.87 J	<b>12.5</b>	ND	2.15	ND	ND	16.36	ND	ND	ND	ND	0.84 J
	5/16/2016	0.88 J	<b>9.63</b>	ND	2.26	ND	ND	13.41	ND	ND	ND	ND	0.64 J
	8/31/2016	1.31	<b>13.3</b>	ND	3.78	ND	ND	19.07	ND	ND	ND	ND	0.68 J
	11/16/2016	1.13	<b>8.36</b>	ND	2.89	ND	ND	13.00	ND	ND	ND	ND	0.62 J
	2/22/2017	1.54	<b>11.9</b>	ND	3.72	ND	ND	17.57	ND	ND	ND	ND	0.41 J
	5/8/2017	1.43	<b>8.98</b>	ND	3.28	ND	ND	14.02	ND	ND	ND	ND	0.33 J
	8/16/2017	1.47	<b>8.92</b>	ND	3.38	ND	ND	15.68	ND	ND	ND	ND	1.91 J
	11/16/2017	1.56	<b>10.3</b>	ND	3.42	ND	ND	15.61	ND	ND	ND	ND	0.33 J
	2/20/2018	2.24	<b>11.9</b>	ND	4.18	ND	ND	18.63	ND	ND	ND	ND	0.31 J
	5/22/2018	2.08	<b>11.6</b>	ND	4.05	ND	ND	17.73	ND	ND	ND	ND	ND
	8/21/2018	1.92	<b>7.44</b>	ND	4.20	ND	ND	13.56	ND	ND	ND	ND	ND
	11/26/2018	2.08	<b>9.84</b>	ND	4.85	ND	ND	16.77	ND	ND	ND	ND	ND
	2/18/2019	2.54	<b>9.27</b>	ND	5.75	ND	ND	17.56	ND	ND	ND	ND	ND
	5/13/2019	2.75	<b>12.0</b>	ND	7.26	ND	ND	22.01	ND	ND	ND	ND	ND
MW-15R	8/19/2019	2.53	<b>8.85</b>	ND	6.16	ND	ND	29.44	ND	ND	ND	ND	11.9
	11/20/2019	2.02	<b>8.13</b>	ND	4.52	ND	ND	14.67	ND	ND	ND	ND	ND
	11/12/2015	<b>4.94</b>	<b>24.9</b>	ND	7.64	ND	0.72	38.20	ND	ND	ND	ND	ND
	5/17/2016	<b>8.54</b>	<b>39.0</b>	2.13 J	7.95	ND	<b>2.25</b>	59.87	ND	ND	ND	ND	ND
	11/15/2016	<b>12.3</b>	<b>38.9</b>	ND	20.8	ND	<b>2.74</b>	74.74	ND	ND	ND	ND	ND
	5/8/2017	<b>4.35</b>	<b>9.86</b>	ND	ND	ND	1.31	15.52	ND	ND	ND	ND	ND
	11/14/2017	<b>5.15</b>	<b>20.3</b>	ND	1.65	ND	1.56	28.66	ND	ND	ND	ND	ND
	5/24/2018	<b>4.66</b>	<b>11.8</b>	<b>8.98</b>	1.71	ND	1.52	28.67	ND	ND	ND	ND	ND
MW-16	11/27/2018	2.89	<b>12.8</b>	ND	3.22	ND	1.03	19.94	ND	ND	ND	ND	ND
	5/14/2019	<b>8.46</b>	<b>27.3</b>	ND	3.72	ND	1.87	41.35	ND	ND	ND	ND	ND
	11/20/2019	<b>18.9</b>	<b>55.5</b>	ND	12.7	ND	<b>4.77</b>	91.87	ND	ND	ND	ND	ND
	11/12/2015	<b>173</b>	<b>67.5</b>	<b>6.63</b>	ND	<b>141</b>	<b>65.8</b>	485.21	11.5	ND	ND	ND	19.78
	1/12/2016	<b>146</b>	<b>35.1</b>	<b>6.93</b>	2.00	ND	<b>17.6</b>	239.95	8.54	ND	ND	ND	23.78
	2/18/2016	<b>115</b>	<b>41.3</b>	<b>6.01</b>	ND	<b>59.9 J</b>	<b>23.5</b>	272.65	5.77	ND	ND	ND	21.17
	3/22/2016	<b>133</b>	<b>88.3</b>	4.30	ND	ND	<b>54.3</b>	303.41	8.51	ND	ND	ND	15.00
	4/18/2016	<b>136</b>	<b>130</b>	<b>6.08</b>	7.75	<b>103</b>	<b>73.7</b>	488.19	6.12	ND	ND	ND	25.54
	5/16/2016	<b>188</b>	<b>322</b>	<b>5.77</b>	ND	<b>184</b>	<b>134</b>	860.93	ND	ND	ND	ND	27.16
	6/27/2016	<b>163</b>	<b>122</b>	<b>6.59</b>	0.83 J	<b>160</b>	<b>151</b>	637.28	9.51	ND	ND	ND	24.35
	8/30/2016	<b>155</b>	<b>53.6</b>	3.00 J	4.43	<b>109</b>	<b>66.4</b>	415.92	9.02	ND	ND	ND	15.47 J
	11/18/2016	<b>117</b>	<b>21.1</b>	4.58	ND	<b>51.9 J</b>	<b>19.8</b>	239.63	ND	ND	ND	ND	23.75 J
	2/22/2017	<b>118</b>	<b>23.2</b>	<b>6.37</b>	3.63	<b>87.9 J</b>	<b>39.9</b>	313.88	3.32	ND	ND	ND	31.56
	5/9/2017	<b>129</b>	<b>78.8</b>	<b>7.18</b>	21.1	<b>82.9</b>	<b>54.2</b>	408.36	ND	ND	ND	ND	35.18
	8/14/2017	<b>78.6</b>	<b>50.1</b>	3.76 J	7.98	<b>54.9 J</b>	<b>33.0</b>	260.13	4.84	ND	ND	ND	26.95 J
	11/16/2017	<b>94.9</b>	<b>108</b>	3.93 J	3.15	<b>57.8 J</b>	<b>40.3</b>	336.99	ND	ND	ND	ND	28.91
	2/21/2018	<b>167</b>	<b>254</b>	<b>8.93</b>	8.61	<b>80.8 J</b>	<b>55.1</b>	611.61	12.2	ND	ND	ND	24.97 J
	5/21/2018	<b>97.6</b>	<b>98.0</b>	<b>5.08</b>	2.25	<b>56.3 J</b>	<b>59.8</b>	331.66	ND	ND	ND	ND	12.63 J
	8/21/2018	<b>127</b>	<b>40.6</b>	2.76 J	ND	ND	ND	241.12	43.8	ND	ND	ND	26.96 J
	11/27/2018	<b>98.1</b>	<b>42.6</b>	2.81 J	ND	ND	<b>8.62</b>	203.82	27.5	ND	ND	ND	24.19 J
	2/18/2019	<b>109</b>	<b>36.6</b>	2.21 J	ND	ND	<b>6.44</b>	193.78	22.3	ND	ND	ND	17.23 J
	5/13/2019	<b>83.0</b>	<b>38.2</b>	2.33 J	ND	ND	<b>7.70</b>	152.66	8.17	ND	ND	ND	13.26 J
	8/19/2019	<b>102</b>	<b>57.3</b>	ND	4.24	ND	<b>10.0</b>	206.17	10.1	ND	ND	ND	22.53 J
	11/20/2019	<b>129</b>	<b>114</b>	ND	ND	ND	<b>25.5</b>	289.48	12.0	ND	ND	ND	8.98 J

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**Former AT&T Richmond Works Facility**  
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**Baseline Data for Shutdown begins in January 2016**

Location	Date Sampled	1,1-DCA	1,1-DCE	MEC	1,1,1-TCA	1,4-Dioxane	Vinyl Chloride	TOTAL VOCs	Chloro-ethane	Chloroform	PCE	TCE	Other VOCs
Clean-up Goal, µg/l	mm/dd/yyyy	4	7	5	200	4.6	2	--	NA	NA	NA	NA	NA
MW-17	11/12/2015	34.5	35.5	ND	17.7	14.9	3.91	106.51	ND	ND	ND	ND	ND
	1/12/2016	210	260	ND	146	94.3	27.1	742.43	3.25	ND	ND	0.31 J	1.47
	2/18/2016	179	138	ND	90.3	75.0	11.7	496.14	2.14	ND	ND	ND	ND
	3/22/2016	123	89.8	ND	50.9	93.1	10.7	368.66	1.16	ND	ND	ND	ND
	4/18/2016	238	303	2.04 J	163	125.0	36.4	871.90	3.26	ND	ND	0.36 J	0.84
	5/16/2016	134	132	2.16 J	51.8	96.4	18.9	437.93	1.96	ND	ND	ND	0.71
	6/27/2016	122	139	1.43 J	47.0	59.5	24.4	395.77	1.91	ND	ND	ND	0.53
	8/31/2016	121	148	ND	43.8	93.1	29.9	438.36	1.77	ND	ND	ND	0.79 J
	11/18/2016	142	130	ND	38.4	82.5	23.2	422.09	ND	ND	ND	ND	5.99 J
	2/22/2017	130	121	ND	37.7	87.9	21.9	400.53	ND	ND	ND	ND	2.03
	5/9/2017	114	100	ND	31.2	95.7	19.5	374.47	ND	ND	ND	ND	14.07
	8/16/2017	161	168	ND	60.6	126.0	43.7	576.11	1.79	ND	ND	ND	15.02 J
	11/16/2017	194	229	ND	84.0	82.6 J	44.4	653.85	2.53	ND	ND	ND	17.32
	2/21/2018	171	174	ND	58.7	78.3	29.8	523.75	1.62	ND	ND	ND	10.33 J
	5/22/2018	30.0	32.2	1.00 J	11.1	17.1	4.02	103.05	ND	ND	ND	ND	7.63 J
	8/21/2018	89.6	61.2	ND	13.1	59.0	20.2	270.49	ND	ND	ND	ND	27.39 J
	11/26/2018	91.0	101	ND	22.9	67.3	27.7	324.95	ND	ND	ND	ND	15.05 J
	2/19/2019	67.0	53.9	ND	14.6	26.2	5.38	189.08	0.71 J	ND	ND	ND	21.29 J
	5/13/2019	133	154	ND	45.2	70.0	17.0	462.63	ND	ND	ND	ND	43.43 J
	8/19/2019	92.0	90.8	ND	19.0	42.6	13.6	298.77	ND	ND	ND	ND	40.77 J
	11/20/2019	118	159	ND	40.5	81.5	20.2	437.69	ND	ND	ND	ND	18.49
MW-18	11/10/2015	109	702	ND	107	162	40.8	1136.14	9.00	1.18	0.80 J	0.93 J	3.43
	11/18/2016	137	936	3.25 J	220	214	7.97	1526.24	2.04	1.37	1.08	0.95 J	2.58 J
	11/16/2017	99.2	584	3.27 J	70.1	135	26.5	935.00	3.81	1.18	0.82 J	0.79 J	10.33
	11/26/2018	77.9	441	2.58 J	70.0	110	12.3	727.71	1.60	0.91	0.84 J	0.57 J	10.01 J
	11/20/2019	89.4	657	ND	99.8	ND	3.42	852.05	ND	0.82	0.60 J	0.61 J	0.40 J
MW-21R	11/12/2015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/15/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/16/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/26/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/20/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-22R	11/12/2015	0.95 J	0.58 J	ND	11.2	ND	ND	12.73	ND	ND	ND	ND	ND
	5/16/2016	0.62 J	0.32 J	2.05 J	3.03	ND	ND	6.02	ND	ND	ND	ND	ND
	6/28/2016	0.75 J	ND	1.07 J	3.94	ND	ND	5.76	ND	ND	ND	ND	ND
	11/18/2016	2.02	1.2	ND	22.7	ND	ND	25.92	ND	ND	ND	ND	ND
	5/8/2017	0.73 J	ND	ND	3.27	ND	ND	4.00	ND	ND	ND	ND	ND
	11/16/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/22/2018	ND	ND	ND	0.63 J	ND	ND	0.63	ND	ND	ND	ND	ND
	11/26/2018	ND	ND	ND	0.90 J	ND	ND	1.92	ND	ND	ND	ND	1.02 J
	5/13/2019	0.90 J	ND	ND	3.82	ND	ND	4.72	ND	ND	ND	ND	ND
	11/20/2019	0.82 J	ND	ND	1.90	ND	ND	3.44	ND	ND	ND	ND	0.72 J
MW-23	11/12/2015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2/16/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/16/2016	ND	ND	1.61 J	1.01	ND	ND	2.62	ND	ND	ND	ND	ND
	8/31/2016	ND	ND	ND	1.00 J	ND	ND	1.00	ND	ND	ND	ND	ND
	11/18/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2/22/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/8/2017	ND	ND	ND	1.05	ND	ND	1.05	ND	ND	ND	ND	ND
	8/16/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/16/2017	ND	1.64	ND	ND	ND	ND	1.64	ND	ND	ND	ND	ND
	2/19/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/22/2018	0.89 J	11.8	ND	2.07	ND	ND	14.76	ND	ND	ND	ND	ND
	8/21/2018	ND	0.79 J	ND	2.06	ND	ND	2.85	ND	ND	ND	ND	ND
	11/26/2018	1.10	16.5	ND	1.93	ND	ND	19.53	ND	ND	ND	ND	ND
	2/18/2019	ND	ND	ND	1.54	ND	ND	1.54	ND	ND	ND	ND	ND
	5/13/2019	ND	0.83 J	ND	2.63	ND	ND	3.46	ND	ND	ND	ND	ND
	8/19/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/20/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND



**Table 2**  
**Former AT&T Richmond Works Facility**  
**Surface Water and Groundwater Monitoring Results, ug/l**  
**Baseline Data for Shutdown begins in January 2016**

Location	Date Sampled	1,1-DCA	1,1-DCE	MEC	1,1,1-TCA	1,4-Dioxane	Vinyl Chloride	TOTAL VOCs	Chloro-ethane	Chloroform	PCE	TCE	Other VOCs
Clean-up Goal, µg/l	mm/dd/yyyy	4	7	5	200	4.6	2	--	NA	NA	NA	NA	NA
MW-24	11/12/2015	18.1	162	ND	21.5	104	ND	305.60	ND	ND	ND	ND	ND
	2/18/2016	24.4	168	ND	22.2	81.4 J	ND	296.55	ND	0.55	ND	ND	ND
	5/16/2016	23.6	199	ND	20.3	71.0 J	ND	313.90	ND	ND	ND	ND	ND
	8/31/2016	23.3	178	ND	17.1	127	ND	345.40	ND	ND	ND	ND	ND
	11/18/2016	28.7	197	ND	20.7	92.8 J	ND	339.20	ND	ND	ND	ND	ND
	2/22/2017	24.2	158	1.36 J	15.3	82.6 J	ND	281.46	ND	ND	ND	ND	ND
	5/8/2017	27.8	178	ND	16.9	54.7 J	ND	277.40	ND	ND	ND	ND	ND
	8/16/2017	27.0	180	ND	16.7	103	0.30 J	328.21	ND	ND	ND	ND	1.21 J
	11/16/2017	30.8	214	ND	17.4	121	ND	383.20	ND	ND	ND	ND	ND
	2/21/2018	26.0	168	ND	15.7	77.0	ND	286.70	ND	ND	ND	ND	ND
	5/22/2018	27.7	149	ND	17.8	115	ND	309.50	ND	ND	ND	ND	ND
	8/21/2018	27.7	164	ND	16.7	61.4 J	0.56	270.36	ND	ND	ND	ND	ND
	11/26/2018	23.4	166	ND	13.2	49.4 J	0.99	252.99	ND	ND	ND	ND	ND
	2/19/2019	24.9	135	ND	12.9	67.9 J	0.73	241.43	ND	ND	ND	ND	ND
	5/13/2019	30.4	163	ND	15.0	ND	1.02	209.42	ND	ND	ND	ND	ND
MW-25	8/19/2019	28.7	179	ND	13.0	ND	0.78	221.48	ND	ND	ND	ND	ND
	11/20/2019	23.8	163	ND	11.9	ND	1.00	199.70	ND	ND	ND	ND	ND
	11/12/2015	8.54	84.8	ND	14.5	25.9	ND	135.06	ND	0.85	0.47 J	ND	ND
	2/18/2016	11.7	94.5	ND	18.1	30.1	ND	155.81	ND	0.82	0.59 J	ND	ND
	5/16/2016	12.4	136	ND	24.2	40.5	ND	214.40	ND	0.71	0.62 J	ND	ND
	8/30/2016	13.5	165	ND	34.9	47.2	ND	262.16	ND	0.89	0.67 J	ND	ND
	11/15/2016	12.5	140	ND	39.8	48.7	ND	242.56	ND	0.87	0.69 J	ND	ND
	2/22/2017	12.3	126	ND	44.9	43.9	ND	228.54	ND	0.74	0.70 J	ND	ND
	5/8/2017	13.1	140	ND	61.2	40.0	ND	255.68	ND	0.77	0.61 J	ND	ND
	8/14/2017	13.3	154	ND	84.6	62.3	ND	317.09	ND	0.61	0.64 J	ND	1.64 J
	11/16/2017	9.46	133	ND	82.7	46.6	ND	272.80	ND	0.53	0.51 J	ND	ND
	2/21/2018	15.4	209	ND	141	48.7	ND	415.36	ND	0.71	0.55 J	ND	ND
	5/22/2018	20.7	238	6.38	156	64.5	ND	487.16	ND	1.01	0.57 J	ND	ND
	8/21/2018	18.9	269	ND	183	92.1	ND	564.37	ND	0.68	0.69 J	ND	ND
	11/27/2018	17.5	350	ND	198	101	ND	667.66	ND	0.61	0.55 J	ND	ND
MW-26	2/18/2019	28.0	341	ND	237	102	1.03	710.25	ND	0.65	0.57 J	ND	ND
	5/14/2019	22.9	372	ND	261	120	ND	777.12	ND	0.58	0.64 J	ND	ND
	8/19/2019	16.3	285	ND	209	104	ND	615.47	ND	0.51	0.66 J	ND	ND
	11/20/2019	19.5	296	ND	199	110	ND	624.95	ND	ND	0.45 J	ND	ND
	11/12/2015	11.7	157	ND	103	70.3 J	ND	342.00	ND	ND	ND	ND	ND
	5/17/2016	20.4	354	ND	376	ND	ND	750.40	ND	ND	ND	ND	ND
	11/17/2016	23.2	464	ND	1450	105	ND	2042.20	ND	ND	ND	ND	ND
	5/9/2017	15.6	247	ND	234	78.9 J	ND	575.50	ND	ND	ND	ND	ND
MW-26	11/14/2017	24.0	290	ND	153	68.1 J	ND	535.10	ND	ND	ND	ND	ND
	5/22/2018	40.9	445	ND	208	137	1.41	832.31	ND	ND	ND	ND	ND
	11/27/2018	8.59	115	ND	24.8	ND	ND	148.39	ND	ND	ND	ND	ND
	5/14/2019	6.29	74.4	ND	37.1	ND	ND	117.79	ND	ND	ND	ND	ND
	11/20/2019	23.6	302	ND	403	99.3 J	3.69	831.59	ND	ND	ND	ND	ND

**Table 2**  
**Former AT&T Richmond Works Facility**  
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**Baseline Data for Shutdown begins in January 2016**

Location	Date Sampled	1,1-DCA	1,1-DCE	MEC	1,1,1-TCA	1,4-Dioxane	Vinyl Chloride	TOTAL VOCs	Chloro-ethane	Chloroform	PCE	TCE	Other VOCs
Clean-up Goal, µg/l	mm/dd/yyyy	4	7	5	200	4.6	2	--	NA	NA	NA	NA	NA
MW-28	11/12/2015	3.01	48.8	ND	114	5.83	ND	174.91	ND	3.27	ND	ND	ND
	1/12/2016	3.31	91.5	ND	231	11.4	ND	342.16	ND	4.95	ND	ND	ND
	2/16/2016	1.59	44.9	ND	104	5.96	ND	162.30	ND	5.85	ND	ND	ND
	3/22/2016	1.59	41.5	ND	71.2	12.4	ND	134.12	ND	7.43	ND	ND	ND
	4/18/2016	2.66	32.5	1.34 J	28.6	7.93	ND	81.92	ND	8.89	ND	ND	ND
	5/17/2016	2.58	29.4	1.18 J	23.4	7.52	ND	74.00	ND	9.52	ND	ND	ND
	6/27/2016	2.50	29.2	1.18 J	19.9	8.08	ND	70.57	ND	9.71	ND	ND	ND
	8/31/2016	2.70	31.3	ND	18.5	7.70	ND	70.90	ND	10.7	ND	ND	ND
	11/15/2016	3.22	32.0	ND	26.0	9.29	ND	80.81	ND	10.3	ND	ND	ND
	2/20/2017	3.06	22.3	ND	21.5	9.62	ND	65.83	ND	9.35	ND	ND	ND
	5/8/2017	2.68	21.2	ND	15.1	8.74	ND	58.84	ND	10.6	ND	ND	0.52 J
	8/16/2017	2.78	18.5	ND	9.72	7.84	ND	48.18	ND	8.07	ND	ND	1.27 J
	11/16/2017	4.08	12.7	ND	6.63	5.28	ND	35.22	ND	5.16	1.37	ND	ND
	2/19/2018	6.51	9.91	ND	7.52	3.23	ND	32.90	ND	3.56	2.17	ND	ND
	5/21/2018	7.67	10.1	ND	9.32	4.38	ND	37.34	ND	2.76	3.11	ND	ND
	8/22/2018	7.82	7.03	ND	9.54	3.19	ND	32.49	ND	1.32	3.59	ND	ND
	11/27/2018	7.36	7.66	ND	11.8	3.11	ND	33.73	ND	0.60	3.20	ND	ND
	2/18/2019	7.57	4.68	ND	11.3	4.84	ND	30.63	ND	ND	2.24	ND	ND
	5/13/2019	9.06	5.99	ND	20.3	4.42	ND	50.95	ND	ND	1.42	ND	9.76 J
	8/21/2019	4.37	3.70	ND	23.3	7.73	ND	39.95	ND	ND	0.85 J	ND	ND
	11/20/2019	8.45	6.09	ND	31.6	8.80	ND	55.39	ND	ND	0.45 J	ND	ND
MW-29	11/10/2015	6.44	14.2	ND	18.2	ND	ND	38.84	ND	ND	ND	ND	ND
	11/15/2016	6.83	7.03	ND	11.2	ND	ND	25.69	ND	ND	ND	ND	0.63 J
	11/16/2017	5.14	6.96	ND	5.84	ND	ND	18.64	ND	ND	ND	ND	0.70 J
	11/26/2018	3.49	4.51	ND	6.51	ND	ND	14.51	ND	ND	ND	ND	ND
	11/19/2019	2.68	4.98	ND	5.67	ND	ND	14.21	ND	ND	ND	ND	0.88 J
MW-30R	11/12/2015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/15/2016	0.67 J	ND	ND	ND	ND	ND	0.67	ND	ND	ND	ND	ND
	11/16/2017	0.48 J	ND	ND	ND	ND	ND	0.48	ND	ND	ND	ND	ND
	11/26/2018	ND	ND	ND	1.85	ND	ND	1.85	ND	ND	ND	ND	ND
	11/18/2019	ND	ND	ND	1.71	ND	ND	1.71	ND	ND	ND	ND	ND
MW-33	11/12/2015	98.8	2320	ND	6620	666	0.44 J	9710.25	ND	0.94	0.84 J	1.45	1.78
	2/18/2016	132	2300	1.66 J	5300	606	0.40 J	8344.41	ND	0.99	0.73 J	1.31	1.32
	3/22/2016	176	2380	1.28 J	4880	837	0.98	8279.92	ND	0.99	0.88 J	1.38	1.41
	4/18/2016	170	2800	3.02 J	4110	448	1.18	7537.85	ND	0.96	0.83 J	1.53	2.33
	5/18/2016	266	3490	1.99 J	4200	568	1.87	8533.00	ND	1.03	0.79 J	1.57	1.34
	6/27/2016	253	3110	3.27 J	3190	544	2.14	7106.88	ND	1.03	0.77 J	1.46	1.18
	8/30/2016	288	1000	ND	1100	569	2.38	2963.42	ND	1.14	0.76 J	1.36	0.78 J
	11/15/2016	327	1960	4.29	1500	669	2.35	4468.62	ND	1.02	1.04	1.68	2.24 J
	2/20/2017	274	2640	6.46	2760	540	1.15	6226.10	ND	0.86	0.75 J	1.48	1.40
	5/9/2017	335	2170	15.0	3080	421	1.29	6058.42	0.69 J	1.26	0.78 J	2.16	31.24
	8/14/2017	206	832	19.3	1740	179	1.51	3075.39	0.53 J	1.07	ND	1.47	94.51 J
	11/16/2017	247	129	45.1	2760	219	1.34	3555.51	0.94 J	1.35	ND	1.44	150.34
	2/21/2018	279	587	54.1	2400	147	2.03	3618.97	0.63 J	1.56	0.58 J	1.93	145.14
	5/22/2018	252	1690	29.5	3440	203	3.10	5716.99	ND	1.75	1.00	2.58	94.06 J
	8/21/2018	236	877	49.0	2930	214	6.40	4415.05	ND	1.25	0.77 J	2.23	98.4 J
	11/27/2018	274	213	77.4	1580	276	4.38	2499.27	ND	0.94	0.51 J	1.33	71.71
	2/18/2019	236	1240	54.0	2060	254	19.4	3917.16	ND	0.95	0.87 J	2.03	49.91 J
	5/13/2019	291	1200	87.6	2060	469	25.8	4180.22	ND	0.82	0.70 J	1.87	43.43 J
	8/19/2019	184	1680	52.1	2220	300	15.3	4477.66	ND	0.66	0.77 J	1.43	23.40 J
	11/20/2019	338	1960	61.0	1900	423	39.6	4751.81	ND	1.07	0.74 J	2.15	26.25 J

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**Baseline Data for Shutdown begins in January 2016**

Location	Date Sampled	1,1-DCA	1,1-DCE	MEC	1,1,1-TCA	1,4-Dioxane	Vinyl Chloride	TOTAL VOCs	Chloro-ethane	Chloroform	PCE	TCE	Other VOCs
Clean-up Goal, µg/l	mm/dd/yyyy	4	7	5	200	4.6	2	--	NA	NA	NA	NA	NA
MW-34	11/12/2015	44.2	585	ND	52.4	31.7	ND	724.56	ND	3.80	5.24	1.56	0.66
	3/22/2016	55.9	878	ND	69.8	29.1	ND	1044.15	ND	3.83	5.38	1.51	0.63
	4/18/2016	46.4	593	2.52 J	57.7	27.5	ND	735.46	ND	3.28	3.93	1.13	ND
	5/17/2016	76.9	938	ND	89.6	40.2	ND	1158.40	ND	4.42	7.18	2.10	ND
	6/27/2016	57.4	952	ND	62.6	37.5	ND	1118.92	ND	3.38	4.62	1.42	ND
	8/30/2016	49.2	557	ND	59.4	26.7	ND	701.16	ND	3.21	3.91	1.23	0.51 J
	11/15/2016	37.7	571	ND	43.3	23.8	ND	682.90	ND	2.32	3.75	1.03	ND
	2/20/2017	36.4	483	ND	36.9	19.2	ND	581.57	ND	2.13	2.95	0.99 J	ND
	5/9/2017	53.4	692	ND	49.7	24.9	ND	828.70	ND	2.67	4.57	1.46	ND
	8/15/2017	77.3	803	ND	72.4	24.5	ND	989.04	ND	4.52	4.28	1.85	1.19 J
	11/14/2017	55.6	569	ND	50.6	22.9	ND	705.74	ND	2.81	3.53	1.30	ND
	2/19/2018	56.3	638	ND	52.1	22.7	ND	776.49	ND	2.44	3.66	1.29	ND
	5/22/2018	50.0	769	ND	37.9	22.8	ND	886.26	ND	2.05	3.43	1.08	ND
	8/21/2018	25.4	318	ND	44.1	19.6	ND	411.16	ND	1.37	2.03	0.66	ND
	11/27/2018	4.70	80.8	ND	4.11	7.95	ND	98.11	ND	ND	0.55 J	ND	ND
	2/19/2019	4.48	64.1	ND	6.24	6.71	ND	82.01	ND	ND	0.48 J	ND	ND
	5/14/2019	3.36	66.8	ND	5.66	6.97	ND	83.28	ND	ND	0.49 J	ND	ND
	8/20/2019	5.92	109	ND	12.0	6.98	ND	142.12	ND	ND	0.90 J	ND	7.32 J
	11/20/2019	10.4	147	ND	20.3	17.4	ND	196.16	ND	ND	1.06	ND	ND
MW-35	11/12/2015	4.86	74.9	ND	11.2	12.0	ND	105.54	ND	1.23	1.35	ND	ND
	5/16/2016	12.4	184	1.60 J	84.5	14.3	ND	300.80	ND	1.62	1.92	0.45 J	ND
	6/27/2016	11.6	185	1.79 J	86.1	11.5	ND	299.70	ND	1.45	1.82	0.44 J	ND
	7/20/2016	12.8	196	1.88 J	116	15.6	ND	347.31	ND	1.60	2.82	0.61 J	ND
	8/30/2016	14.0	241	ND	153	14.4	ND	426.25	ND	1.45	1.94	0.49 J	ND
	11/15/2016	14.2	239	ND	184	10.7	ND	451.73	ND	1.47	1.85	0.51 J	ND
	2/22/2017	13.2	178	ND	177	14.4	ND	385.92	ND	1.37	1.51	0.44 J	ND
	5/8/2017	16.4	277	ND	181	14.0	ND	492.75	ND	1.52	2.16	0.67 J	ND
	8/14/2017	16.4	255	ND	218	20.4	ND	513.81	ND	1.18	1.76	0.57 J	0.50 J
	11/14/2017	11.2	222	ND	194	15.3	ND	445.56	ND	1.01	1.65	0.40 J	ND
	2/21/2018	11.7	202	ND	162	13.4	ND	391.49	ND	0.94	1.12	0.33 J	ND
	5/22/2018	14.5	247	ND	222	18.7	ND	505.07	ND	1.20	1.16	0.51 J	ND
	8/21/2018	10.1	182	ND	173	10.5	ND	377.51	ND	0.81	1.10	ND	ND
	11/27/2018	8.80	225	ND	175	14.2	ND	425.00	ND	0.78	1.22	ND	ND
	2/18/2019	11.2	205	ND	197	16.6	ND	431.80	ND	0.74	1.26	ND	ND
	5/14/2019	14.1	272	ND	351	19.6	ND	658.88	ND	1.01	1.17	ND	ND
	8/19/2019	6.28	144	ND	220	20.0	ND	391.19	ND	ND	0.91 J	ND	ND
	11/20/2019	7.22	172	ND	285	20.6	0.72	486.18	ND	ND	0.64 J	ND	ND
MW-36	11/12/2015	13.8	173	ND	33.0	84.9 J	ND	305.31	ND	0.61	ND	ND	ND
	2/16/2016	16.0	192	ND	40.7	48.4 J	ND	297.79	ND	0.69	ND	ND	ND
	5/16/2016	13.5	156	2.02 J	37.5	ND	ND	209.50	ND	0.50 J	ND	ND	ND
	6/27/2016	10.8	132	1.96 J	41.2	42.2	ND	228.16	ND	ND	ND	ND	ND
	7/20/2016	13.0	148	1.65 J	57.3	44.9	ND	266.64	ND	0.79	0.66 J	0.34 J	ND
	8/30/2016	15.5	190	ND	63.2	66.7	ND	335.90	ND	0.50 J	ND	ND	ND
	11/15/2016	15.2	174	ND	56.3	69.5	ND	315.41	ND	0.41 J	ND	ND	0.41 J
	2/22/2017	11.1	108	ND	48.6	44.1	ND	211.80	ND	ND	ND	ND	ND
	5/8/2017	10.0	114	ND	53.1	38.3	ND	215.98	ND	0.58	ND	ND	ND
	8/14/2017	25.6	231	ND	92.4	112	ND	462.34	ND	ND	ND	ND	1.34 J
	11/16/2017	18.4	163	ND	60.0	132	ND	373.40	ND	ND	ND	ND	ND
	2/21/2018	22.4	174	ND	65.2	93.4	ND	355.00	ND	ND	ND	ND	ND
	5/22/2018	22.1	210	1.28 J	90.9	91.7	0.65	424.50	ND	0.72	ND	ND	7.15 J
	8/21/2018	28.8	313	ND	148	115	1.42	606.22	ND	ND	ND	ND	ND
	11/27/2018	10.5	138	ND	67.6	50.1	ND	266.20	ND	ND	ND	ND	ND
	2/18/2019	8.03	103	ND	74.8	32.5	ND	218.33	ND	ND	ND	ND	ND
	5/14/2019	6.28	110	ND	98.1	29.8	ND	244.18	ND	ND	ND	ND	ND
	8/19/2019	3.21	41.7	ND	27.0	16.6	ND	88.51	ND	ND	ND	ND	ND
	11/20/2019	2.90	44.6	ND	30.8	12.5	ND	90.80	ND	ND	ND	ND	ND

**Table 2**  
**Former AT&T Richmond Works Facility**  
**Surface Water and Groundwater Monitoring Results, ug/l**  
**Baseline Data for Shutdown begins in January 2016**

Location	Date Sampled	1,1-DCA	1,1-DCE	MEC	1,1,1-TCA	1,4-Dioxane	Vinyl Chloride	TOTAL VOCs	Chloro-ethane	Chloroform	PCE	TCE	Other VOCs
Clean-up Goal, µg/l	mm/dd/yyyy	4	7	5	200	4.6	2	--	NA	NA	NA	NA	NA
MW-37	11/12/2015	3.42	58.3	ND	10.9	ND	ND	72.62	ND	ND	ND	ND	ND
	11/15/2016	4.75	82.6	ND	14.4	ND	ND	101.75	ND	ND	ND	ND	ND
	11/16/2017	3.43	52.1	ND	13.5	ND	ND	69.03	ND	ND	ND	ND	ND
	11/26/2018	11.7	133	ND	52.7	51.8 J	ND	249.20	ND	ND	ND	ND	ND
	11/20/2019	7.98	84.3	ND	30.7	ND	ND	122.98	ND	ND	ND	ND	ND
MW-66	12/16/2015	7.98	65.4	ND	30.0	ND	ND	103.81	ND	0.43 J	ND	ND	ND
	2/18/2016	7.19	54.9	ND	17.3	ND	ND	79.89	ND	0.50 J	ND	ND	ND
	5/16/2016	5.98	48.6	1.05 J	16.2	ND	ND	71.80	ND	ND	ND	ND	ND
	8/30/2016	4.74	45.0	ND	12.4	ND	ND	62.14	ND	ND	ND	ND	ND
	11/15/2016	6.00	52.2	ND	18.0	ND	ND	76.20	ND	ND	ND	ND	ND
	2/22/2017	9.63	120	ND	117	ND	ND	246.63	ND	ND	ND	ND	ND
	5/8/2017	6.95	52.9	ND	28.0	ND	ND	87.85	ND	ND	ND	ND	ND
	8/14/2017	6.65	54.7	ND	35.4	ND	ND	96.75	ND	ND	ND	ND	ND
	11/16/2017	7.04	56.1	ND	39.0	ND	ND	102.14	ND	ND	ND	ND	ND
	2/20/2018	10.5	80.7	ND	49.7	ND	ND	140.90	ND	ND	ND	ND	ND
	5/24/2018	14.2	98.7	1.30 J	64.8	ND	ND	179.00	ND	ND	ND	ND	ND
	8/23/2018	13.3	83.3	ND	54.3	ND	ND	150.90	ND	ND	ND	ND	ND
	11/27/2018	11.7	77.3	ND	40.1	ND	ND	143.20	ND	ND	ND	ND	14.1
	2/19/2019	6.26	42.4	ND	22.0	ND	ND	70.66	ND	ND	ND	ND	ND
	5/14/2019	14.9	100	ND	52.4	ND	ND	167.30	ND	ND	ND	ND	ND
	8/19/2019	12.5	88.2	ND	44.0	ND	ND	144.70	ND	ND	ND	ND	ND
	11/18/2019	12.6	104	ND	48.4	ND	ND	165.00	ND	ND	ND	ND	ND

**Table 2**  
**Former AT&T Richmond Works Facility**  
**Surface Water and Groundwater Monitoring Results, ug/l**  
**Baseline Data for Shutdown begins in January 2016**

Location	Date Sampled	1,1-DCA	1,1-DCE	MEC	1,1,1-TCA	1,4-Dioxane	Vinyl Chloride	TOTAL VOCs	Chloro-ethane	Chloroform	PCE	TCE	Other VOCs
Clean-up Goal, ug/l	mm/dd/yyyy	4	7	5	200	4.6	2	--	NA	NA	NA	NA	NA
<b>Off-Site Monitoring Wells</b>													
MW-31	11/11/2015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/17/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/15/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/27/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/19/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-32	11/11/2015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/17/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/15/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/27/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/19/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-50	11/11/2015	1.54	<b>19.2</b>	ND	2.05	<b>6.57</b>	ND	29.36	ND	ND	ND	ND	ND
	1/13/2016	1.03	<b>12.3</b>	ND	1.22	3.91	ND	18.46	ND	ND	ND	ND	ND
	2/17/2016	0.56 J	<b>7.01</b>	ND	ND	2.71	ND	10.28	ND	ND	ND	ND	ND
	3/23/2016	1.08	<b>13.0</b>	ND	1.12	<b>5.00</b>	ND	20.20	ND	ND	ND	ND	ND
	4/19/2016	1.66	<b>18.6</b>	1.58 J	1.5	<b>8.17</b>	ND	31.51	ND	ND	ND	ND	ND
	5/18/2016	0.92 J	<b>10.3</b>	ND	0.83 J	4.30	ND	16.35	ND	ND	ND	ND	ND
	6/28/2016	0.57 J	<b>7.60</b>	1.40 J	ND	2.32	ND	11.89	ND	ND	ND	ND	ND
	9/1/2016	3.15	<b>48.2</b>	ND	3.62	<b>12.3</b>	ND	67.27	ND	ND	ND	ND	ND
	11/17/2016	3.35	<b>48.9</b>	ND	3.77	<b>14.1</b>	ND	70.57	ND	0.45 J	ND	ND	ND
	2/21/2017	2.32	<b>29.5</b>	ND	2.88	<b>11.0</b>	ND	55.90	ND	ND	ND	ND	10.2
	5/10/2017	2.48	<b>31.1</b>	ND	3.26	<b>11.3</b>	ND	48.14	ND	ND	ND	ND	ND
	8/15/2017	<b>6.59</b>	<b>95.6</b>	ND	10.5	<b>30.5</b>	ND	143.68	ND	0.49 J	ND	ND	ND
	11/15/2017	3.39	<b>41.5</b>	ND	5.08	<b>20.7</b>	ND	70.67	ND	ND	ND	ND	ND
	2/20/2018	3.40	<b>42.3</b>	ND	4.43	<b>11.8</b>	ND	61.93	ND	ND	ND	ND	ND
	5/23/2018	1.45	<b>19.5</b>	ND	1.95	<b>10.8</b>	ND	33.70	ND	ND	ND	ND	ND
	8/22/2018	3.06	<b>44.0</b>	ND	3.66	<b>21.7</b>	ND	72.42	ND	ND	ND	ND	ND
	11/29/2018	1.41	<b>19.0</b>	ND	1.40	<b>5.98</b>	ND	27.79	ND	ND	ND	ND	ND
	2/19/2019	0.76 J	<b>8.82</b>	ND	0.70 J	3.32	ND	13.60	ND	ND	ND	ND	ND
	5/15/2019	0.75 J	<b>10.2</b>	ND	0.73 J	<b>4.91</b>	ND	16.59	ND	ND	ND	ND	ND
	8/20/2019	<b>6.78</b>	<b>91.9</b>	ND	10.8	<b>30.3</b>	ND	147.57	ND	ND	ND	ND	7.79 J
	11/19/2019	<b>10.5</b>	<b>127</b>	ND	17.4	<b>46.2</b>	ND	201.10	ND	ND	ND	ND	ND
MW-51	11/11/2015	3.42	<b>51.2</b>	ND	6.93	<b>22.8</b>	ND	84.35	ND	ND	ND	ND	ND
	1/13/2016	3.01	<b>40.4</b>	ND	5.45	<b>14.6</b>	ND	63.46	ND	ND	ND	ND	ND
	2/17/2016	3.01	<b>42.3</b>	1.55 J	5.73	<b>17.6</b>	ND	70.99	ND	ND	ND	ND	0.80 J
	3/23/2016	2.58	<b>35.1</b>	ND	4.54	<b>21.2</b>	ND	63.42	ND	ND	ND	ND	ND
	4/19/2016	3.52	<b>54.8</b>	1.17 J	6.53	<b>17.3</b>	ND	83.32	ND	ND	ND	ND	ND
	5/18/2016	<b>4.60</b>	<b>63.7</b>	ND	7.73	<b>28.2</b>	ND	104.23	ND	ND	ND	ND	ND
	6/28/2016	<b>4.70</b>	<b>71.4</b>	ND	7.90	<b>25.9</b>	ND	109.90	ND	ND	ND	ND	ND
	9/1/2016	<b>7.70</b>	<b>121</b>	ND	13.5	<b>38.7</b>	ND	180.90	ND	ND	ND	ND	ND
	10/18/2016	<b>8.55</b>	<b>116</b>	ND	12.9	<b>50.0</b>	ND	187.86	ND	0.41 J	ND	ND	ND
	11/17/2016	<b>10.1</b>	<b>128</b>	ND	14.2	<b>51.4</b>	ND	204.16	ND	0.46 J	ND	ND	ND
	1/12/2017	<b>10.7</b>	<b>120</b>	ND	10.9	<b>49.1</b>	ND	190.70	ND	ND	ND	ND	ND
	2/21/2017	<b>13.4</b>	<b>134</b>	ND	14.6	<b>50.1</b>	ND	212.52	ND	0.42 J	ND	ND	ND
	5/10/2017	<b>10.1</b>	<b>128</b>	ND	13.3	<b>54.0</b>	ND	205.40	ND	ND	ND	ND	ND
	8/15/2017	<b>12.0</b>	<b>137</b>	ND	12.7	<b>62.4</b>	ND	224.52	ND	0.42 J	ND	ND	ND
	11/15/2017	<b>9.80</b>	<b>111</b>	ND	10.7	<b>48.8</b>	ND	180.30	ND	ND	ND	ND	ND
	2/20/2018	<b>13.7</b>	<b>131</b>	ND	11.6	<b>50.8</b>	ND	207.10	ND	ND	ND	ND	ND
	5/23/2018	<b>11.0</b>	<b>116</b>	ND	10.4	<b>61.4</b>	ND	198.80	ND	ND	ND	ND	ND
	8/22/2018	<b>9.80</b>	<b>99.8</b>	ND	9.25	<b>45.7</b>	ND	164.55	ND	ND	ND	ND	ND
	11/29/2018	<b>10.7</b>	<b>104</b>	ND	8.93	<b>49.5</b>	ND	180.22	ND	ND	ND	ND	7.09 J
	2/19/2019	<b>17.5</b>	<b>145</b>	ND	17.5	<b>47.0</b>	ND	227.00	ND	ND	ND	ND	ND
	5/15/2019	<b>11.0</b>	<b>113</b>	ND	14.0	<b>55.0</b>	ND	200.43	ND	ND	ND	ND	7.43 J
	8/21/2019	<b>12.5</b>	<b>100</b>	ND	11.0	<b>45.8</b>	ND	178.69	ND	ND	ND	ND	9.39 J
	11/19/2019	<b>16.5</b>	<b>130</b>	ND	13.0	<b>51.6</b>	0.54	211.64	ND	ND	ND	ND	ND

**Table 2**  
**Former AT&T Richmond Works Facility**  
**Surface Water and Groundwater Monitoring Results, ug/l**  
**Baseline Data for Shutdown begins in January 2016**

Location	Date Sampled	1,1-DCA	1,1-DCE	MEC	1,1,1-TCA	1,4-Dioxane	Vinyl Chloride	TOTAL VOCs	Chloro-ethane	Chloroform	PCE	TCE	Other VOCs
Clean-up Goal, µg/l	mm/dd/yyyy	4	7	5	200	4.6	2	--	NA	NA	NA	NA	NA
MW-52	11/11/2015	7.30	27.8	ND	2.42	11.6	ND	49.12	ND	ND	ND	ND	ND
	2/17/2016	4.58	10.1	ND	ND	6.93	0.42 J	22.03	ND	ND	ND	ND	ND
	5/18/2016	3.97	12.1	ND	ND	5.41	0.71	22.19	ND	ND	ND	ND	ND
	9/1/2016	3.63	12.5	ND	ND	5.15	0.41 J	21.69	ND	ND	ND	ND	ND
	11/17/2016	5.43	27.7	ND	ND	5.35	0.44 J	38.92	ND	ND	ND	ND	ND
	2/21/2017	7.59	49.2	ND	ND	11.1	0.42 J	68.31	ND	ND	ND	ND	ND
	5/10/2017	11.7	81.7	ND	ND	14.7	0.65	108.75	ND	ND	ND	ND	ND
	8/15/2017	7.54	60.2	ND	ND	14.3	0.86	83.53	ND	ND	ND	ND	0.63
	11/15/2017	5.79	46.4	ND	ND	9.07	0.64	61.90	ND	ND	ND	ND	ND
	2/20/2018	6.04	51.5	ND	ND	6.03	0.84	64.41	ND	ND	ND	ND	ND
	5/23/2018	4.94	42.3	ND	ND	9.55	ND	56.79	ND	ND	ND	ND	ND
	8/22/2018	5.22	50.1	ND	ND	9.56	1.10	65.98	ND	ND	ND	ND	ND
	11/29/2018	5.06	44.3	ND	ND	8.54	0.64	58.54	ND	ND	ND	ND	ND
	2/19/2019	6.29	58.4	ND	ND	11.2	0.55	76.44	ND	ND	ND	ND	ND
	5/15/2019	5.69	56.2	ND	ND	9.80	0.85	72.54	ND	ND	ND	ND	ND
MW-53	8/20/2019	5.02	43.3	ND	ND	8.28	ND	56.60	ND	ND	ND	ND	ND
	11/19/2019	8.24	61.0	ND	ND	11.9	1.17	82.31	ND	ND	ND	ND	ND
	11/11/2015	0.48 J	1.83	ND	ND	ND	ND	2.31	ND	ND	ND	ND	ND
	1/13/2016	0.65 J	0.48 J	ND	ND	ND	0.69	1.82	ND	ND	ND	ND	ND
	2/17/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3/23/2016	2.47	5.76	ND	ND	2.14	3.76	14.13	ND	ND	ND	ND	ND
	4/19/2016	4.43	13.0	1.51 J	ND	3.49	6.14	28.57	ND	ND	ND	ND	ND
	5/18/2016	0.82 J	2.10	ND	ND	ND	1.22	4.14	ND	ND	ND	ND	ND
	6/28/2016	ND	0.54 J	1.50 J	ND	ND	0.33 J	2.37	ND	ND	ND	ND	ND
	9/1/2016	5.10	18.1	ND	ND	5.23	5.96	34.39	ND	ND	ND	ND	ND
	11/17/2016	4.48	9.28	ND	ND	3.38	6.37	23.51	ND	ND	ND	ND	ND
	2/21/2017	3.20	6.42	ND	ND	3.31	4.60	17.53	ND	ND	ND	ND	ND
	5/10/2017	1.95	2.14	ND	ND	ND	3.24	7.33	ND	ND	ND	ND	ND
	8/15/2017	3.81	7.85	ND	ND	ND	7.42	19.08	ND	ND	ND	ND	ND
	11/15/2017	1.79	3.34	ND	ND	ND	3.89	9.02	ND	ND	ND	ND	ND
	2/20/2018	0.61 J	0.68 J	ND	ND	ND	1.11	2.40	ND	ND	ND	ND	ND
	5/23/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	8/22/2018	3.40	8.69	ND	ND	3.30	9.65	25.04	ND	ND	ND	ND	ND
MW-54	11/29/2018	2.76	7.15	ND	ND	3.14	7.42	30.13	ND	ND	ND	ND	9.66 J
	2/19/2019	0.64 J	3.27	ND	ND	ND	0.51	4.42	ND	ND	ND	ND	ND
	5/15/2019	1.36	2.62	ND	ND	ND	4.12	8.10	ND	ND	ND	ND	ND
	8/20/2019	1.97	5.45	ND	ND	3.23	4.41	24.80	ND	ND	ND	ND	9.74 J
	11/19/2019	1.66	3.89	ND	ND	ND	4.60	10.15	ND	ND	ND	ND	ND
	11/11/2015	ND	0.53 J	ND	ND	ND	ND	0.53	ND	ND	ND	ND	ND
	1/13/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2/17/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3/23/2016	ND	ND	1.22 J	ND	ND	ND	1.22	ND	ND	ND	ND	ND
	4/19/2016	ND	0.60 J	1.86 J	ND	ND	ND	2.46	ND	ND	ND	ND	ND
	5/18/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/28/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	9/1/2016	ND	1.06	ND	ND	ND	ND	1.06	ND	ND	ND	ND	ND
	11/17/2016	ND	0.30 J	ND	ND	ND	ND	0.30	ND	ND	ND	ND	ND
	2/21/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/10/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	8/15/2017	ND	1.27	ND	ND	ND	ND	1.27	ND	ND	ND	ND	ND
	11/15/2017	ND	0.44 J	ND	ND	ND	ND	0.44	ND	ND	ND	ND	ND
	2/20/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/23/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	8/22/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/29/2018	ND	ND	ND	ND	ND	ND	9.87	ND	ND	ND	ND	9.87 J
	2/19/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/15/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	8/20/2019	ND	ND	ND	ND	ND	ND	8.71	ND	ND	ND	ND	8.71 J
	11/19/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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**Former AT&T Richmond Works Facility**  
**Surface Water and Groundwater Monitoring Results, ug/l**  
**Baseline Data for Shutdown begins in January 2016**

Location	Date Sampled	1,1-DCA	1,1-DCE	MEC	1,1,1-TCA	1,4-Dioxane	Vinyl Chloride	TOTAL VOCs	Chloro-ethane	Chloroform	PCE	TCE	Other VOCs
Clean-up Goal, µg/l	mm/dd/yyyy	4	7	5	200	4.6	2	--	NA	NA	NA	NA	NA
MW-55	11/11/2015	ND	ND	ND	1.53	ND	ND	1.53	ND	ND	ND	ND	ND
	1/13/2016	ND	ND	ND	0.71 J	ND	ND	0.71	ND	ND	ND	ND	ND
	2/17/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3/23/2016	ND	ND	1.47 J	1.14	ND	ND	2.61	ND	ND	ND	ND	ND
	4/19/2016	ND	ND	2.01 J	1.37	ND	ND	3.38	ND	ND	ND	ND	ND
	5/18/2016	ND	ND	ND	0.77 J	ND	ND	0.77	ND	ND	ND	ND	ND
	6/28/2016	ND	ND	ND	1.34	ND	ND	1.34	ND	ND	ND	ND	ND
	9/1/2016	ND	ND	ND	2.07	ND	ND	2.07	ND	ND	ND	ND	ND
	11/17/2016	ND	ND	ND	1.24	ND	ND	1.24	ND	ND	ND	ND	ND
	2/21/2017	ND	ND	ND	1.50	ND	ND	1.50	ND	ND	ND	ND	ND
	5/10/2017	ND	ND	ND	1.62	ND	ND	1.62	ND	ND	ND	ND	ND
	8/15/2017	ND	ND	ND	1.00 J	ND	ND	1.00	ND	ND	ND	ND	ND
	11/15/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2/20/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/23/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	8/22/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/29/2018	ND	ND	ND	ND	ND	ND	8.32	ND	ND	ND	ND	8.32 J
	2/19/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/15/2019	ND	ND	ND	0.79 J	ND	ND	0.79	ND	ND	ND	ND	ND
	8/20/2019	ND	ND	ND	1.12	ND	ND	9.83	ND	ND	ND	ND	8.71 J
	11/19/2019	ND	ND	ND	1.41	ND	ND	1.41	ND	ND	ND	ND	ND
MW-56	11/11/2015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1/13/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2/17/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3/23/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	4/19/2016	ND	ND	1.31 J	ND	ND	ND	1.31	ND	ND	ND	ND	ND
	5/18/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	9/1/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/17/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2/21/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/10/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	8/15/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/15/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2/20/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/23/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	8/22/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/29/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2/19/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/15/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	8/20/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/19/2019	ND	ND	ND	ND	ND	ND	5.07	ND	ND	ND	ND	5.07 J
MW-62	11/11/2015	1.40	12.2	ND	2.21	ND	ND	15.81	ND	ND	ND	ND	ND
	2/17/2016	3.32	36.8	ND	5.22	ND	ND	45.86	ND	0.52	ND	ND	ND
	5/18/2016	3.53	55.6	ND	5.95	ND	ND	65.08	ND	ND	ND	ND	ND
	9/1/2016	2.26	22.0	ND	2.96	ND	ND	27.22	ND	ND	ND	ND	ND
	11/17/2016	2.92	34.2	ND	3.91	ND	ND	41.03	ND	ND	ND	ND	ND
	2/21/2017	3.24	39.5	ND	4.54	ND	ND	47.28	ND	ND	ND	ND	ND
	5/10/2017	3.93	46.8	ND	5.00	ND	ND	55.73	ND	ND	ND	ND	ND
	8/15/2017	3.26	33.8	ND	4.20	ND	ND	42.41	ND	ND	ND	ND	1.15 J
	11/15/2017	3.72	39.9	ND	4.78	ND	ND	48.40	ND	ND	ND	ND	ND
	2/20/2018	6.28	75.0	ND	7.39	ND	ND	88.67	ND	ND	ND	ND	ND
	5/23/2018	5.76	57.2	ND	5.96	42.6 J	ND	112.04	ND	0.52	ND	ND	ND
	8/22/2018	2.93	27.7	ND	3.53	ND	ND	34.16	ND	ND	ND	ND	ND
	11/29/2018	4.76	34.8	ND	3.64	ND	ND	43.20	ND	ND	ND	ND	ND
	2/19/2019	6.64	78.0	ND	7.50	ND	ND	92.14	ND	ND	ND	ND	ND
	5/15/2019	4.53	39.1	ND	4.89	ND	ND	48.52	ND	ND	ND	ND	ND
	8/20/2019	5.99	41.7	ND	6.41	ND	ND	62.13	ND	ND	ND	ND	8.03 J
	11/19/2019	7.04	45.1	ND	6.48	ND	ND	58.62	ND	ND	ND	ND	ND



**Table 2**  
**Former AT&T Richmond Works Facility**  
**Surface Water and Groundwater Monitoring Results, ug/l**  
**Baseline Data for Shutdown begins in January 2016**

Location	Date Sampled	1,1-DCA	1,1-DCE	MEC	1,1,1-TCA	1,4-Dioxane	Vinyl Chloride	TOTAL VOCs	Chloro-ethane	Chloroform	PCE	TCE	Other VOCs
Clean-up Goal, µg/l	mm/dd/yyyy	4	7	5	200	4.6	2	--	NA	NA	NA	NA	NA
MW-63	11/11/2015	5.75	87.9	ND	13.6	ND	ND	107.69	ND	0.44 J	ND	ND	ND
	5/18/2016	6.89	106	ND	15.1	ND	ND	127.99	ND	ND	ND	ND	ND
	11/17/2016	7.37	69.9	ND	10.7	45.6 J	ND	133.57	ND	ND	ND	ND	ND
	5/10/2017	11.7	153	ND	21.0	67.9 J	ND	254.06	ND	0.46 J	ND	ND	ND
	11/16/2017	8.78	109	ND	17.3	71.5 J	ND	206.58	ND	ND	ND	ND	ND
	5/23/2018	11.3	156	ND	26.3	46.9 J	ND	240.50	ND	ND	ND	ND	ND
	11/28/2018	11.1	184	ND	21.8	76.4 J	ND	293.30	ND	ND	ND	ND	ND
	5/14/2019	15.3	169	ND	28.3	ND	ND	212.60	ND	ND	ND	ND	ND
	11/19/2019	10.2	112	ND	22.6	ND	ND	144.80	ND	ND	ND	ND	ND
MW-64	11/11/2015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/18/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/17/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/10/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/15/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/23/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/29/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/15/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/19/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-65	11/11/2015	ND	ND	ND	0.71 J	ND	ND	0.71	ND	ND	ND	ND	ND
	5/18/2016	ND	ND	ND	1.66	ND	ND	1.66	ND	ND	ND	ND	ND
	11/17/2016	ND	ND	ND	1.57	ND	ND	1.57	ND	ND	ND	ND	ND
	5/10/2017	ND	ND	ND	1.03	ND	ND	1.03	ND	ND	ND	ND	ND
	11/15/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/23/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/29/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/15/2019	ND	ND	ND	0.89 J	ND	ND	0.89	ND	ND	ND	ND	ND
	11/19/2019	ND	ND	ND	0.65 J	ND	ND	0.65	ND	ND	ND	ND	ND

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**Former AT&T Richmond Works Facility**  
**Surface Water and Groundwater Monitoring Results, ug/l**  
**Baseline Data for Shutdown begins in January 2016**

Location	Date Sampled	1,1-DCA	1,1-DCE	MEC	1,1,1-TCA	1,4-Dioxane	Vinyl Chloride	TOTAL VOCs	Chloro-ethane	Chloroform	PCE	TCE	Other VOCs
Clean-up Goal, ug/l	mm/dd/yyyy	4	7	5	200	4.6	2	--	NA	NA	NA	NA	NA
<b>Extraction Wells</b>													
EW-1	11/12/2015	11.6	158	ND	34.3	92.8 J	ND	296.70	ND	ND	ND	ND	ND
	5/19/2016	12.3	137	ND	34.4	ND	ND	183.70	ND	ND	ND	ND	ND
	7/20/2016	15.3	185	3.76 J	44.1	76.1	ND	324.79	ND	0.53	ND	ND	ND
	11/16/2016	15.9	179	ND	48.7	62.8 J	ND	306.92	ND	0.52	ND	ND	ND
	5/11/2017	15.9	198	ND	53.1	84.6 J	ND	352.12	ND	0.52	ND	ND	ND
	11/17/2017	11.6	147	ND	35.8	61.6 J	ND	256.00	ND	ND	ND	ND	ND
	5/24/2018	7.02	71.7	ND	11.7	ND	ND	97.71	ND	ND	ND	ND	7.29 J
	11/28/2018	14.1	54.4	ND	7.36	ND	ND	75.86	ND	ND	ND	ND	ND
	5/16/2019	24.4	90.2	ND	12.1	ND	0.70	127.40	ND	ND	ND	ND	ND
EW-2	11/18/2019	23.3	107	ND	20.1	ND	3.23	153.63	ND	ND	ND	ND	ND
	11/12/2015	17.0	216	ND	27.3	161	ND	422.25	ND	0.55	0.40 J	ND	ND
	5/19/2016	16.8	163	ND	19.6	125	ND	324.40	ND	ND	ND	ND	ND
	11/16/2016	19.3	161	ND	17.9	68.6 J	ND	267.20	ND	0.40 J	ND	ND	ND
	5/11/2017	17.9	143	ND	15.2	66.1 J	ND	242.20	ND	ND	ND	ND	ND
	11/17/2017	17.8	158	ND	23.9	95.0 J	ND	294.70	ND	ND	ND	ND	ND
	5/24/2018	26.3	206	ND	21.3	110	ND	364.16	ND	0.56	ND	ND	ND
	11/28/2018	12.6	62.5	1.13 J	12.6	ND	0.50	89.33	ND	ND	ND	ND	ND
	5/16/2019	16.2	72.9	ND	14.3	46.0 J	1.23	150.63	ND	ND	ND	ND	ND
EW-3	11/20/2019	29.4	187	ND	19.9	131	0.54	367.84	ND	ND	ND	ND	ND
	11/12/2015	51.5	88.1	ND	14.3	89.1	4.08	243.93	0.93 J	ND	ND	ND	ND
	5/19/2016	85.0	76.7	ND	38.5	ND	14.3	216.16	1.51	ND	ND	ND	0.15 J
	11/16/2016	164	136	ND	74.3	56.1 J	27.6	460.83	1.76	ND	ND	ND	1.07 J
	5/9/2017	67.3	61.1	ND	27.5	ND	6.16	162.92	0.86 J	ND	ND	ND	ND
	11/17/2017	30.8	56.3	ND	20.7	ND	0.98	108.78	ND	ND	ND	ND	ND
	5/24/2018	60.6	81.6	ND	27.7	ND	1.68	171.58	ND	ND	ND	ND	ND
	11/28/2018	191	246	ND	56.0	74.6 J	16.6	585.28	1.08	ND	ND	ND	ND
	5/16/2019	2.02	4.12	ND	1.67	ND	ND	17.91	ND	ND	ND	ND	10.1
EW-4	11/18/2019	14.4	26.2	ND	6.35	ND	0.86	47.81	ND	ND	ND	ND	ND
	11/12/2015	7.93	123	ND	3.26	ND	ND	135.03	ND	ND	ND	ND	0.84 J
	5/19/2016	11.6	203	ND	3.19	ND	ND	219.09	ND	0.42 J	ND	ND	0.88 J
	11/16/2016	7.00	104	ND	1.76	ND	ND	113.75	ND	0.46 J	ND	ND	0.99 J
	5/9/2017	11.7	163	ND	3.86	ND	ND	179.62	ND	0.43 J	ND	ND	0.63 J
	11/17/2017	7.16	110	ND	1.52	ND	0.42 J	119.59	ND	ND	ND	ND	0.49 J
	5/25/2018	5.06	65.6	ND	2.45	ND	ND	74.77	ND	ND	ND	ND	1.66
	11/28/2018	6.92	94.8	ND	1.83	ND	ND	103.55	ND	ND	ND	ND	ND
	5/14/2019	2.68	42.6	ND	0.94 J	ND	ND	46.22	ND	ND	ND	ND	ND
EW-5	11/18/2019	8.46	119	ND	1.50	ND	2.99	132.48	ND	0.53	ND	ND	ND
	11/12/2015	0.52 J	9.98	ND	ND	ND	ND	10.50	ND	ND	ND	ND	ND
	5/19/2016	ND	1.16	ND	ND	ND	ND	1.16	ND	ND	ND	ND	ND
	11/16/2016	ND	0.54 J	ND	ND	ND	ND	0.54	ND	ND	ND	ND	ND
	5/9/2017	ND	1.32	ND	ND	ND	ND	1.32	ND	ND	ND	ND	ND
	11/17/2017	ND	0.81 J	ND	0.95 J	ND	ND	1.76	ND	ND	ND	ND	ND
	5/25/2018	ND	1.56	ND	ND	ND	ND	1.56	ND	ND	ND	ND	ND
	11/28/2018	0.92 J	18.0	ND	0.97 J	ND	0.71	20.60	ND	ND	ND	ND	ND
	5/14/2019	0.74 J	8.45	ND	1.32	ND	ND	10.51	ND	ND	ND	ND	ND
EW-6	11/20/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/12/2015	0.71 J	11.8	ND	3.34	ND	ND	15.85	ND	ND	ND	ND	ND
	5/19/2016	ND	1.66	ND	1.49	ND	ND	3.15	ND	ND	ND	ND	ND
	11/16/2016	2.06	2.69	ND	0.98 J	ND	ND	5.73	ND	ND	ND	ND	ND
	5/9/2017	1.41	7.00	ND	2.37	ND	ND	10.78	ND	ND	ND	ND	ND
	11/17/2017	0.68 J	4.75	ND	0.86 J	ND	ND	6.29	ND	ND	ND	ND	ND
	5/24/2018	ND	0.74 J	ND	ND	ND	ND	0.74	ND	ND	ND	ND	ND
	11/28/2018	ND	1.16	ND	ND	ND	ND	1.16	ND	ND	ND	ND	ND
	5/16/2019	0.98 J	1.98	ND	ND	ND	ND	2.96	ND	ND	ND	ND	ND

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**Former AT&T Richmond Works Facility**  
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**Baseline Data for Shutdown begins in January 2016**

Location	Date Sampled	1,1-DCA	1,1-DCE	MEC	1,1,1-TCA	1,4-Dioxane	Vinyl Chloride	TOTAL VOCs	Chloro-ethane	Chloroform	PCE	TCE	Other VOCs
Clean-up Goal, ug/l	mm/dd/yyyy	4	7	5	200	4.6	2	--	NA	NA	NA	NA	NA
EW-7	11/12/2015	0.55 J	1.32	ND	1.37	ND	ND	3.24	ND	ND	ND	ND	ND
	5/19/2016	ND	0.69 J	ND	0.94 J	ND	ND	1.63	ND	ND	ND	ND	ND
	11/16/2016	0.55 J	0.72 J	ND	ND	ND	ND	1.27	ND	ND	ND	ND	ND
	5/9/2017	0.75 J	1.79	ND	1.78	ND	ND	4.32	ND	ND	ND	ND	ND
	11/17/2017	ND	0.77 J	ND	ND	ND	ND	0.77	ND	ND	ND	ND	ND
	5/24/2018	ND	2.54	ND	2.12	ND	ND	4.66	ND	ND	ND	ND	ND
EW-8	11/12/2015	1.57	1.93	ND	5.70	ND	ND	9.20	ND	ND	ND	ND	ND
	5/19/2016	0.50 J	0.50 J	ND	1.88	ND	ND	2.88	ND	ND	ND	ND	ND
	11/16/2016	1.80	1.31	ND	4.16	ND	ND	7.27	ND	ND	ND	ND	ND
	5/9/2017	1.93	1.84	ND	5.95	ND	ND	9.72	ND	ND	ND	ND	ND
	11/17/2017	1.90	2.90	ND	4.50	ND	ND	9.30	ND	ND	ND	ND	ND
	5/24/2018	2.29	3.13	ND	5.84	ND	ND	11.26	ND	ND	ND	ND	ND
EW-9	11/20/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/12/2015	<b>76.3</b>	<b>1080</b>	ND	<b>878</b>	<b>163</b>	<b>2.44</b>	2202.12	0.52 J	0.64	0.59 J	0.63 J	ND
	2/16/2016	<b>21.5</b>	<b>89.0</b>	ND	106	<b>107</b>	<b>6.63</b>	330.13	ND	ND	ND	ND	ND
	5/17/2016	<b>182</b>	<b>659</b>	ND	<b>897</b>	ND	<b>2.72</b>	1740.72	ND	ND	ND	ND	ND
	6/27/2016	<b>155</b>	<b>272</b>	2.48 J	<b>802</b>	<b>249</b>	1.91	1497.36	ND	ND	ND	ND	14.97
	8/30/2016	<b>256</b>	<b>213</b>	<b>6.04</b>	<b>1390</b>	<b>289</b>	1.87	2215.85	ND	0.47 J	ND	0.46 J	59.01 J
	11/16/2016	<b>165</b>	<b>273</b>	<b>7.32</b>	<b>636</b>	<b>233</b>	1.64	1357.20	ND	0.48 J	ND	0.41 J	40.35 J
	2/20/2017	<b>86.5</b>	<b>421</b>	1.29 J	<b>765</b>	<b>157</b>	1.68	1438.38	0.68 J	0.63	0.61 J	0.76 J	3.23
	5/9/2017	<b>78.7</b>	<b>563</b>	3.03 J	<b>539</b>	<b>122</b>	<b>3.89</b>	1313.17	0.55 J	0.80	ND	0.73 J	1.47 J
	8/14/2017	<b>76.3</b>	<b>500</b>	ND	<b>545</b>	<b>119</b>	<b>10.70</b>	1257.35	ND	1.01	0.57 J	0.68 J	4.09 J
	11/16/2017	<b>78.4</b>	<b>741</b>	2.72 J	<b>750</b>	<b>124</b>	<b>18.2</b>	1722.27	ND	0.94	0.54 J	0.65 J	5.82
	2/19/2018	<b>56.7</b>	<b>232</b>	2.52 J	<b>689</b>	<b>104</b>	<b>9.34</b>	1100.54	ND	0.85	ND	0.44 J	5.69 J
	5/24/2018	<b>102</b>	<b>454</b>	1.88 J	<b>474</b>	<b>213</b>	<b>36.2</b>	1289.19	ND	0.54	ND	ND	7.57 J
	8/22/2018	<b>43.6</b>	<b>379</b>	2.43 J	<b>607</b>	<b>118</b>	<b>4.77</b>	1159.86	ND	1.12	0.47 J	0.58 J	2.89 J
	11/28/2018	<b>21.9</b>	<b>199</b>	1.54 J	<b>272</b>	<b>43.0 J</b>	1.29	539.32	ND	0.59	ND	ND	ND
EW-10	2/19/2019	3.63	<b>49.3</b>	ND	37.8	ND	ND	90.73	ND	ND	ND	ND	ND
	5/14/2019	<b>52.1</b>	<b>578</b>	ND	<b>538</b>	<b>87.1 J</b>	<b>5.69</b>	1263.21	ND	0.98	0.57 J	0.77 J	ND
	8/19/2019	<b>101</b>	<b>785</b>	ND	<b>746</b>	<b>97.3 J</b>	<b>10.7</b>	1742.98	ND	1.47	0.56 J	0.95 J	ND
	11/19/2019	<b>81.2</b>	<b>681</b>	ND	<b>602</b>	ND	<b>11.1</b>	1377.98	ND	1.33	0.63 J	0.72 J	ND
	11/12/2015	<b>82.6</b>	<b>1360</b>	<b>120</b>	<b>3450</b>	<b>408</b>	0.75	5424.84	ND	1.27	0.71 J	1.05	0.46 J
	2/16/2016	<b>184</b>	<b>1230</b>	<b>16.4</b>	<b>2180</b>	<b>521</b>	<b>12.4</b>	4146.14	ND	0.72	ND	0.42 J	1.20
	5/16/2016	2.79	<b>17.9</b>	4.98	34.7	ND	ND	60.37	ND	ND	ND	ND	ND
	6/27/2016	<b>167</b>	<b>225</b>	<b>670</b>	<b>2450</b>	<b>554</b>	<b>5.53</b>	4099.29	0.41 J	0.49 J	ND	0.35 J	26.51
	8/30/2016	<b>360</b>	<b>393</b>	<b>1640</b>	<b>5170</b>	<b>1240</b>	<b>4.64</b>	8843.60	0.80 J	1.13	0.45 J	1.16	32.42 J
	11/16/2016	<b>79.1</b>	<b>676</b>	<b>84.1</b>	<b>661</b>	<b>187</b>	1.28	1688.48	ND	ND	ND	ND	ND
	2/22/2017	<b>380</b>	<b>1890</b>	<b>27.7</b>	<b>1330</b>	<b>971</b>	1.95	4625.14	ND	1.14	0.46 J	1.13	21.76
	5/8/2017	<b>207</b>	<b>1300</b>	<b>8.46</b>	<b>649</b>	<b>335</b>	0.78	2510.49	ND	0.64	ND	0.77 J	8.84 J
	8/16/2017	<b>392</b>	<b>3110</b>	3.03 J	<b>768</b>	<b>589</b>	<b>2.66</b>	4872.11	ND	1.35	1.23	1.52	3.32 J
	11/17/2017	<b>161</b>	<b>1590</b>	2.57 J	<b>285</b>	<b>162</b>	1.26	2203.64	ND	0.56	0.56 J	0.69 J	ND
	2/20/2018	<b>103</b>	<b>632</b>	2.05 J	<b>320</b>	<b>137</b>	0.84	1195.92	ND	0.53	ND	0.50 J	ND
EW-10	5/24/2018	<b>132</b>	<b>781</b>	3.33 J	<b>668</b>	<b>137</b>	1.44	1725.01	ND	0.95	0.49 J	0.80 J	ND
	8/23/2018	<b>154</b>	<b>1100</b>	2.21 J	<b>356</b>	<b>250</b>	<b>2.20</b>	1866.55	ND	0.97	0.47 J	0.70 J	ND
	11/28/2018	<b>152</b>	<b>890</b>	ND	<b>261</b>	<b>198</b>	1.40	1504.01	ND	0.96	ND	0.65 J	ND
	2/19/2019	<b>248</b>	<b>1820</b>	1.27 J	<b>332</b>	<b>252</b>	1.44	2657.72	ND	1.55	0.55 J	0.91 J	ND
	5/14/2019	<b>593</b>	<b>2050</b>	<b>39.3</b>	<b>292</b>	<b>429</b>	<b>7.89</b>	3443.28	29.7	1.36	ND	1.03	ND
	8/21/2019	<b>1880</b>	<b>4620</b>	<b>74.4</b>	<b>1240</b>	<b>688</b>	<b>34.8</b>	8586.20	33.6	1.96	0.51 J	1.58	11.35 J
	11/19/2019	<b>1020</b>	<b>3620</b>	<b>29.2</b>	<b>1740</b>	<b>516</b>	<b>38.4</b>	6975.91	7.74	2.39	0.72 J	1.46	ND

**Table 2**  
**Former AT&T Richmond Works Facility**  
**Surface Water and Groundwater Monitoring Results, ug/l**  
**Baseline Data for Shutdown begins in January 2016**

Location	Date Sampled	1,1-DCA	1,1-DCE	MEC	1,1,1-TCA	1,4-Dioxane	Vinyl Chloride	TOTAL VOCs	Chloro-ethane	Chloroform	PCE	TCE	Other VOCs
Clean-up Goal, µg/l	mm/dd/yyyy	4	7	5	200	4.6	2	--	NA	NA	NA	NA	NA
EW-11	11/12/2015	4.20	33.4	ND	111	ND	ND	150.12	ND	1.52	ND	ND	ND
	2/16/2016	4.24	20.6	ND	23.5	ND	ND	56.17	ND	7.83	ND	ND	ND
	5/19/2016	2.85	13.1	ND	11.1	ND	ND	32.82	ND	5.77	ND	ND	ND
	9/1/2016	4.50	14.3	ND	19.4	ND	ND	45.49	ND	7.29	ND	ND	7.29
	11/16/2016	5.61	21.9	ND	36.5	ND	ND	72.12	ND	8.11	ND	ND	ND
	2/20/2017	4.43	16.6	ND	26.1	ND	ND	54.77	ND	7.64	ND	ND	ND
	5/11/2017	4.10	15.5	ND	16.8	ND	ND	43.36	ND	6.56	0.40 J	ND	ND
	8/14/2017	4.58	7.94	ND	6.97	ND	ND	24.34	ND	3.48	0.81 J	ND	0.56 J
	11/17/2017	5.99	9.39	ND	9.32	ND	ND	30.05	ND	1.88	3.47	ND	ND
	2/21/2018	7.74	6.22	ND	8.43	ND	ND	26.29	ND	0.87	3.03	ND	ND
	5/24/2018	10.6	13.0	7.13	14.4	ND	ND	50.01	ND	1.44	3.44	ND	ND
	11/28/2018	5.29	5.48	1.05 J	8.05	ND	ND	21.58	ND	ND	1.71	ND	ND
EW-12	5/14/2019	7.22	5.90	ND	20.8	ND	ND	34.82	ND	ND	0.90 J	ND	ND
	11/19/2019	6.05	5.49	ND	15.9	ND	ND	28.93	ND	0.57	0.92 J	ND	ND
	11/12/2015	5.85	20.6	ND	10.9	ND	ND	37.35	ND	ND	ND	ND	ND
	2/16/2016	9.20	1.51	ND	9.52	ND	ND	20.23	ND	ND	ND	ND	ND
	5/19/2016	4.79	1.29	ND	7.23	ND	ND	13.31	ND	ND	ND	ND	ND
	9/1/2016	3.48	1.35	ND	14.9	ND	ND	19.73	ND	ND	ND	ND	ND
	11/16/2016	3.43	1.47	ND	11.0	ND	ND	15.90	ND	ND	ND	ND	ND
	2/20/2017	3.80	1.35	ND	8.90	ND	ND	14.05	ND	ND	ND	ND	ND
	5/11/2017	4.93	2.26	ND	12.2	ND	ND	19.39	ND	ND	ND	ND	ND
	8/16/2017	4.69	2.09	ND	13.8	ND	ND	21.78	ND	ND	ND	ND	1.20 J
	11/17/2017	3.85	2.24	ND	14.1	ND	ND	20.19	ND	ND	ND	ND	ND
	2/21/2018	4.53	2.48	ND	14.0	ND	ND	21.01	ND	ND	ND	ND	ND
	5/24/2018	3.21	1.55	ND	8.60	ND	ND	13.36	ND	ND	ND	ND	ND
	8/23/2018	2.55	1.47	ND	17.8	ND	ND	21.82	ND	ND	ND	ND	ND
	11/28/2018	2.82	1.38	ND	13.4	ND	ND	24.98	ND	ND	ND	ND	7.38 J
EW-13	5/15/2019	2.15	0.76 J	ND	6.42	ND	ND	9.33	ND	ND	ND	ND	ND
	8/21/2019	2.04	0.84 J	ND	11.3	ND	ND	14.18	ND	ND	ND	ND	ND
	11/21/2019	3.70	0.90 J	ND	10.8	ND	ND	15.40	ND	ND	ND	ND	ND
	11/12/2015	16.9	43.3	ND	8.12	ND	0.33 J	69.09	0.44 J	ND	ND	ND	ND
	5/19/2016	18.5	25.9	ND	2.98	ND	1.25	48.63	ND	ND	ND	ND	ND
	11/16/2016	33.1	36.4	ND	3.94	ND	2.54	76.44	0.46 J	ND	ND	ND	ND
	5/11/2017	40.8	35.7	ND	4.80	ND	3.62	84.92	ND	ND	ND	ND	ND
	11/17/2017	35.6	37.7	ND	3.98	ND	5.26	82.54	ND	ND	ND	ND	ND
EW-14	5/24/2018	72.4	93.9	ND	6.22	76.7 J	5.08	263.78	ND	ND	ND	ND	9.48 J
	11/29/2018	67.8	94.7	ND	6.38	73.7 J	8.50	258.68	ND	ND	ND	ND	7.60 J
	5/16/2019	53.1	86.4	ND	7.75	63.3 J	4.97	215.52	ND	ND	ND	ND	ND
	11/20/2019	50.1	82.8	ND	6.91	ND	9.99	149.80	ND	ND	ND	ND	ND
	11/12/2015	175	60.9	ND	8.86	86.4 J	15.6	350.48	3.72	ND	ND	ND	ND
	5/19/2016	223	49.9	ND	4.47	80.6 J	12.7	374.13	3.46	ND	ND	ND	ND
	11/16/2016	228	106	ND	4.86	120	36.7	502.42	5.77	ND	ND	ND	1.09 J
	5/11/2017	122	49.3	ND	3.59	52.4 J	17.0	246.23	1.50	ND	ND	ND	0.44 J
	11/17/2017	83.3	40.7	ND	3.73	61.4 J	17.2	208.56	1.00 J	ND	ND	ND	1.23 J
EW-14	5/24/2018	83.5	83.2	ND	2.97	62.1 J	18.3	259.17	ND	ND	ND	ND	9.10 J
	11/28/2018	38.8	57.8	1.09 J	3.95	42.8 J	3.73	148.17	ND	ND	ND	ND	ND
	5/16/2019	50.0	40.6	ND	3.52	44.8 J	2.82	141.74	ND	ND	ND	ND	ND
EW-14	11/18/2019	91.4	81.0	ND	3.65	ND	13.8	189.85	ND	ND	ND	ND	ND

**Table 2**  
**Former AT&T Richmond Works Facility**  
**Surface Water and Groundwater Monitoring Results, ug/l**  
**Baseline Data for Shutdown begins in January 2016**

Location	Date Sampled	1,1-DCA	1,1-DCE	MEC	1,1,1-TCA	1,4-Dioxane	Vinyl Chloride	TOTAL VOCs	Chloro-ethane	Chloroform	PCE	TCE	Other VOCs
Clean-up Goal, µg/l	mm/dd/yyyy	4	7	5	200	4.6	2	--	NA	NA	NA	NA	NA
EW-15	11/12/2015	109	425	ND	116	179	10.4	845.12	3.70	0.55	0.48 J	0.63 J	0.36 J
	5/19/2016	151	682	1.32 J	138	235	9.48	1229.91	2.95	0.69	0.62 J	0.62 J	8.23
	11/18/2016	109	447	1.26 J	86.1	136	5.48	787.83	1.74	0.54	ND	0.42 J	0.29 J
	5/11/2017	200	975	3.18 J	146	246	8.75	1584.19	2.72	0.80	0.56 J	0.77 J	0.41 J
	11/17/2017	144	1010	2.49 J	133	271	13.8	1579.20	2.30	0.59	0.50 J	0.62 J	0.90
	2/19/2018	231	1010	3.62 J	215	311	20.6	1797.98	3.04	0.77	0.52 J	0.76 J	1.67 J
	5/25/2018	201	905	3.23 J	194	272	14.6	1595.34	2.91	0.85	0.41 J	0.67 J	0.67 J
	8/23/2018	105	582	1.52 J	103	157	6.83	956.80	1.45	ND	ND	ND	ND
	11/29/2018	53.1	233	1.08 J	47.6	73.1 J	3.15	411.03	ND	ND	ND	ND	ND
	2/19/2019	105	567	1.01 J	100	146	5.61	925.88	1.26	ND	ND	ND	ND
	5/15/2019	93.3	492	ND	86.8	159	6.15	843.64	1.11	ND	ND	ND	5.28 J
	8/21/2019	51.3	266	ND	44.7	ND	2.87	364.87	ND	ND	ND	ND	ND
	11/18/2019	152	752	ND	132	254	14.7	1307.70	1.86	0.52	ND	0.62 J	ND
EW-16	11/12/2015	33.1	201	ND	49.9	ND	5.59	293.02	1.72	0.42 J	ND	0.33 J	0.96 J
	5/19/2016	41.1	287	ND	25.1	ND	16.5	376.32	4.24	0.69	ND	ND	1.69 J
	11/18/2016	7.18	23.5	ND	1.66	ND	4.81	37.15	ND	ND	ND	ND	ND
	5/11/2017	2.12	9.12	ND	ND	ND	0.79	19.32	ND	ND	ND	ND	7.29 J
	11/17/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/25/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/28/2018	1.25	ND	ND	ND	ND	0.57	1.82	ND	ND	ND	ND	ND
	5/14/2019	1.17	2.04	ND	ND	ND	1.89	5.10	ND	ND	ND	ND	ND
EW-17	11/18/2019	15.6	21.5	ND	6.56	ND	40.1	83.76	ND	ND	ND	ND	ND
	11/12/2015	2.35	19.6	ND	1.87	ND	ND	23.82	ND	ND	ND	ND	ND
	5/19/2016	7.29	86.5	ND	2.40	ND	ND	97.45	ND	ND	ND	ND	1.26
	11/18/2016	12.3	149	ND	4.35	ND	7.12	174.87	0.44 J	0.41 J	ND	ND	1.25 J
	5/11/2017	19.0	172	ND	4.86	ND	6.08	203.63	1.02	ND	ND	ND	0.67 J
	11/17/2017	10.8	143	ND	2.88	ND	4.83	162.53	ND	0.40 J	ND	ND	0.62 J
	5/25/2018	1.99	21.3	ND	0.75 J	ND	ND	24.04	ND	ND	ND	ND	ND
	11/28/2018	7.23	53.2	ND	0.69 J	ND	17.6	79.13	ND	ND	ND	ND	0.41 J
	5/14/2019	14.7	144	ND	1.76	ND	7.45	167.91	ND	ND	ND	ND	ND
	11/18/2019	13.1	109	ND	ND	ND	23.2	145.30	ND	ND	ND	ND	ND

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**Former AT&T Richmond Works Facility**  
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**Baseline Data for Shutdown begins in January 2016**

Location	Date Sampled	1,1-DCA	1,1-DCE	MEC	1,1,1-TCA	1,4-Dioxane	Vinyl Chloride	TOTAL VOCs	Chloro-ethane	Chloroform	PCE	TCE	Other VOCs
Clean-up Goal, µg/l	mm/dd/yyyy	4	7	5	200	4.6	2	--	NA	NA	NA	NA	NA
EW-18	11/12/2015	180	423	11.0	1550	349	0.69	2513.69	ND	ND	ND	ND	ND
	2/16/2016	0.81 J	0.74 J	ND	ND	ND	ND	1.55	ND	ND	ND	ND	ND
	5/17/2016	1.88	1.64	ND	ND	ND	ND	3.52	ND	ND	ND	ND	ND
	8/30/2016	2.77	3.76	ND	4.28	ND	ND	10.81	ND	ND	ND	ND	ND
	11/16/2016	1.01	1.35	ND	5.99	ND	ND	8.35	ND	ND	ND	ND	ND
	2/22/2017	59.2	228	8.48	232	80.1 J	1.35	610.18	ND	ND	ND	ND	1.05
	5/11/2017	75.3	329	ND	183	110	1.08	698.38	ND	ND	ND	ND	ND
	8/14/2017	6.21	33.4	ND	21.0	ND	0.60	78.94	ND	ND	ND	ND	17.73 J
	11/16/2017	818	3220	883	3570	1640	552	10702.65	8.97	1.00	0.81 J	1.39	7.48 J
	2/19/2018	988	3440	869	4870	1730	585	12504.99	11.1	0.93	0.70 J	1.28	8.98 J
	5/24/2018	20.6	104	3.19 J	122	ND	10.6	260.39	ND	ND	ND	ND	ND
	8/22/2018	1350	3760	933	3610	1460	770	11902.01	7.55	0.98	0.89 J	1.46	8.13 J
	11/28/2018	3.38	24.5	ND	19.4	ND	1.20	48.91	ND	ND	ND	ND	0.43 J
	2/19/2019	729	2700	362	1830	1110	190	6963.52	4.00	0.75	0.76 J	1.33	35.68 J
	5/14/2019	600	2300	464	1700	1110	134	6318.69	4.71	0.62	0.66 J	1.14	3.56 J
	8/19/2019	550	3100	225	2690	1150	28.1	7758.62	1.52	0.67	0.65 J	1.05	11.63
	11/20/2019	355	1530	60.4	2300	641	20.1	4907.66	ND	ND	0.47 J	0.69 J	ND
Surface Water													
SW-15	11/11/2015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2/17/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/18/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	9/1/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/17/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2/21/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/10/2017	ND	ND	ND	ND	ND	ND	8.16	ND	ND	ND	ND	8.16 J
	8/15/2017	ND	ND	ND	ND	ND	ND	1.19	ND	ND	ND	ND	1.19 J
	11/15/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2/20/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/23/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	8/22/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/29/2018	ND	ND	ND	ND	ND	ND	8.39	ND	ND	ND	ND	8.39 J
	2/19/2019	ND	ND	ND	ND	ND	ND	8.07	ND	ND	ND	ND	8.07 J
	5/15/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	8/20/2019	ND	ND	ND	ND	ND	ND	10.20	ND	ND	ND	ND	10.2
	11/19/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SW-20	11/11/2015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/19/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/18/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/10/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/15/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/23/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/28/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/14/2019	ND	ND	ND	ND	ND	ND	7.65	ND	ND	ND	ND	7.65 J
	11/19/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SW-21	11/11/2015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2/17/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/19/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/17/2016	ND	0.30 J	ND	ND	ND	ND	0.30	ND	ND	ND	ND	ND
	2/21/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/10/2017	ND	ND	ND	ND	ND	ND	8.85	ND	ND	ND	ND	8.85 J
	11/15/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2/20/2017	ND	ND	ND	ND	ND	ND	7.50	ND	ND	ND	ND	7.50 J
	5/23/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	8/22/2018	ND	ND	ND	ND	ND	ND	9.83	ND	ND	ND	ND	9.83 J
	11/27/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2/19/2019	ND	ND	ND	ND	ND	ND	8.26	ND	ND	ND	ND	8.26 J
	5/15/2019	ND	ND	ND	ND	ND	ND	11.00	ND	ND	ND	ND	11.0
	8/20/2019	ND	ND	ND	ND	ND	ND	8.92	ND	ND	ND	ND	8.92 J
	11/19/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

**Table 2**  
**Former AT&T Richmond Works Facility**  
**Surface Water and Groundwater Monitoring Results, ug/l**  
**Baseline Data for Shutdown begins in January 2016**

Location	Date Sampled	1,1-DCA	1,1-DCE	MEC	1,1,1-TCA	1,4-Dioxane	Vinyl Chloride	TOTAL VOCs	Chloro-ethane	Chloroform	PCE	TCE	Other VOCs
Clean-up Goal, µg/l	mm/dd/yyyy	4	7	5	200	4.6	2	--	NA	NA	NA	NA	NA
SW-67	11/11/2015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1/13/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2/17/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3/23/2016	ND	ND	1.65 J	ND	2.04	ND	3.69	ND	ND	ND	ND	ND
	4/19/2016	ND	ND	1.59 J	ND	ND	ND	1.59	ND	ND	ND	ND	ND
	5/18/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/28/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	9/1/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/17/2016	ND	0.45 J	ND	ND	ND	ND	0.45	ND	ND	ND	ND	ND
	2/21/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/10/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	8/15/2017	ND	ND	ND	ND	ND	ND	0.64	ND	ND	ND	ND	0.64 J
	11/15/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2/20/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/23/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	8/22/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/29/2018	ND	ND	ND	ND	ND	ND	10.40	ND	ND	ND	ND	10.4
	2/19/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/15/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	8/20/2019	ND	ND	ND	ND	ND	ND	7.96	ND	ND	ND	ND	7.96 J
	11/19/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

**Notes:**

Concentrations reported in micrograms per liter (µg/L).

**BOLD** values exceed respective cleanup goal.

DCA = Dichloroethane, DCE = Dichloroethylene, MEC = Methylene Chloride, TCA = Trichloroethane

PCE = Tetrachloroethylene, TCE = Trichloroethylene, VOC = Volatile Organic Compound

J = Estimated value below the laboratory reporting limit

NA = Not Applicable; ND = Not Detected.

Total VOCs are the sum of the constituents detected with EPA Method 8260B.

Updated By: David Young Date: 12/12/2019

Reviewed By: Forrest Hayward Date: 12/27/2019